



# **STIC Search Report**

## **Biotech-Chem Library**

**STIC Database Tracking Number: 208532**

**TO: Ralph J Gitomer**  
**Location: REM-3D65&3C70**  
**Art Unit: 1657**  
**Wednesday, December 27, 2006**  
**Case Serial Number: 10/829381**

**From: Barb O'Bryen**  
**Location: Biotech-Chem Library**  
**Remsen 1a69**  
**Phone: 571-272-2518**

*BOB*  
**barbara.obryen@uspto.gov**

### **Search Notes**

## INVENTOR SEARCH

=> fil capl; d que l13

FILE 'CAPLUS' ENTERED AT 10:29:25 ON 27 DEC 2006

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FILE COVERS 1907 - 27 Dec 2006 VOL 146 ISS 1

FILE LAST UPDATED: 26 Dec 2006 (20061226/ED)

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<http://www.cas.org/infopolicy.html>

'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

L4	2128	SEA	FILE=CAPLUS	ABB=ON	WEBER E?/AU
L5	2050	SEA	FILE=CAPLUS	ABB=ON	CAI S?/AU
L6	267	SEA	FILE=CAPLUS	ABB=ON	KEANA J?/AU
L7	208	SEA	FILE=CAPLUS	ABB=ON	DREWE J?/AU
L8	29791	SEA	FILE=CAPLUS	ABB=ON	ZHANG H?/AU
L10	50258	SEA	FILE=CAPLUS	ABB=ON	SCREENING/CW
L11	506316	SEA	FILE=CAPLUS	ABB=ON	NEOPLAS?/OBI OR CANCER?/OBI
L12	56	SEA	FILE=CAPLUS	ABB=ON	(L4 OR L5 OR L6 OR L7 OR L8) AND L10 AND L11
L13	10	SEA	FILE=CAPLUS	ABB=ON	FLUOR?/OBI AND L12

=> s l13 or (l13 and l19)

16 L19

L23 10 L13 OR (L13 AND L19)

=> => fil uspatf; d que l36

FILE 'USPATFULL' ENTERED AT 10:32:31 ON 27 DEC 2006

CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 26 Dec 2006 (20061226/PD)

FILE LAST UPDATED: 26 Dec 2006 (20061226/ED)

HIGHEST GRANTED PATENT NUMBER: US7155745

HIGHEST APPLICATION PUBLICATION NUMBER: US2006288461

CA INDEXING IS CURRENT THROUGH 26 Dec 2006 (20061226/UPCA)

ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 26 Dec 2006 (20061226/PD)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2006

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2006

L24 254 SEA FILE=USPATFULL ABB=ON WEBER E?/AU  
 L25 115 SEA FILE=USPATFULL ABB=ON CAI S?/AU  
 L26 74 SEA FILE=USPATFULL ABB=ON KEANA J?/AU  
 L27 35 SEA FILE=USPATFULL ABB=ON DREWE J?/AU  
 L28 1322 SEA FILE=USPATFULL ABB=ON ZHANG H?/AU  
 L31 39835 SEA FILE=USPATFULL ABB=ON (NEOPLAS? OR CANCER?)/IT  
 L33 22871 SEA FILE=USPATFULL ABB=ON SCREENING/IT  
 L35 94536 SEA FILE=USPATFULL ABB=ON FLUOR?/IT  
 L36 10 SEA FILE=USPATFULL ABB=ON (L24 OR L25 OR L26 OR L27 OR L28)  
 AND L33 AND L31 AND L35

=> s 136 or (136 and 137)  
 L38 10 L36 OR (L36 AND L37)

=> => dup rem 123,138  
 PROCESSING COMPLETED FOR L23  
 PROCESSING COMPLETED FOR L38  
 L41 20 DUP REM L23 L38 (0 DUPLICATES REMOVED)  
 ANSWERS '1-10' FROM FILE CAPLUS  
 ANSWERS '11-20' FROM FILE USPATFULL

=> d ibib ed abs hitstr 1-20

L41 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2006:316067 CAPLUS Full-text  
 DOCUMENT NUMBER: 145:23646  
 TITLE: A sensitive and high-throughput assay to detect  
 low-abundance proteins in serum  
 AUTHOR(S): **Zhang, Hongtao**; Cheng, Xin; Richter, Mark;  
 Greene, Mark I.  
 CORPORATE SOURCE: Pathology and Laboratory Medicine, School of Medicine,  
 University of Pennsylvania, Philadelphia, PA, 19104,  
 USA  
 SOURCE: Nature Medicine (New York, NY, United States) (2006),  
 12(4), 473-477  
 CODEN: NAMEFI; ISSN: 1078-8956  
 PUBLISHER: Nature Publishing Group  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 05 Apr 2006  
 AB The ability to detect antigens immunol. is limited by the affinity of the  
 antibodies and the amount of antigens. The authors have now succeeded in  
 creating a modular, facile amplification system, termed fluorescent  
 amplification catalyzed by T7 polymerase technique (FACTT). Such a system can  
 detect protein targets specifically at subfemtomolar levels (.apprx.0.08 fM).  
 The authors describe here the detection of Her2 (also known as Neu) from  
 rodent and human sera. FACTT is adaptable to high-throughput screening and  
 automation and provides a practical method to enhance current ELISAs in  
 medical practice.  
 REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2005:1262607 CAPLUS Full-text  
 DOCUMENT NUMBER: 144:18580  
 TITLE: Method for screening novel mediators of p53  
 ubiquitination by CUL4 E3 ligase complexes  
 INVENTOR(S): **Zhang, Hui**; Banks, Damon Powell; Higa, Leigh  
 Ann Aki

PATENT ASSIGNEE(S): Yale University, USA  
 SOURCE: PCT Int. Appl., 88 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005114188	A2	20051201	WO 2005-US14615	20050427
WO 2005114188	A3	20060518		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2004-565707P P 20040427

ED Entered STN: 02 Dec 2005

AB The invention relates to assays for identifying modulators of p53 ubiquitination by CUL4 E3 ligase complexes. This assays allows detection of agents and compds. that affect p53 ubiquitination and thus, cell cycle regulation and cell survival in cells. In some assays, an increase in ubiquitination, in comparison to a test sample lacking a test compound, indicates a stimulation of p53 ubiquitination activity, whereas a reduction in p53 ubiquitination indicates an inhibitor of activity. The assays provided may be suited, for example, for high-throughput screening of agents. The invention further relates to methods of modulating p53 activity in a cell, such as a cell of a mammal, by administering agents which decrease expression or activity of a member of a CUL4 E3 ligase complex, or which block the binding of p53 to a CUL4 E3 ligase complex.

L41 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:934510 CAPLUS Full-text

DOCUMENT NUMBER: 141:388655

TITLE: Methods of treating diseases responsive to induction of apoptosis and screening assays

INVENTOR(S): Kasibhatla, Shailaja; Cai, Sui Xiong; Tseng, Ben; Jessen, Katayoun Alavi; Maliartchouk, Serguei; English, Nicole Marion; Kuemmerle, Jared; Kemnitzer, William E.; Zhang, Han-Zhong

PATENT ASSIGNEE(S): Cytovia, Inc., USA; Cytovia, Inc. Et Al.

SOURCE: PCT Int. Appl., 158 pp.  
 CODEN: PIXXD2

DOCUMENT TYPE: Patent  
 LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004094648	A2	20041104	WO 2004-US11916	20040419

WO 2004094648 A3 20060323

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2526915 A1 20041104 CA 2004-2526915 20040419  
 US 2005004005 A1 20050106 US 2004-826923 20040419  
 EP 1618205 A2 20060125 EP 2004-750269 20040419

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

PRIORITY APPLN. INFO.: US 2003-463687P P 20030418  
 WO 2004-US11916 W 20040419

ED Entered STN: 06 Nov 2004

AB The present invention pertains to a method of treating, preventing or ameliorating a disease responsive to induction of the caspase cascade in an animal, comprising administering to the animal a compound which binds specifically to a Tail Interacting Protein Related Apoptosis Inducing Protein (TIPRAIP). The present invention also relates to screening methods useful for drug discovery of apoptosis inducing compds. In particular, the screening methodol. relates to using TIPRAIP as a target for the discovery of apoptosis activators useful as anticancer agents. The screening methods of the present invention can employ homogenous or heterogenous binding assays using purified or partially purified TIPRAIP; or whole cell assays using cells with altered levels of TIPRAIP. The invention also contemplates use of 3-(4-azidophenyl)-5-(3-chloro-thiophen-2-yl)-[1,2,4]-oxadiazole or a substituted 3-aryl-5-aryl-[1,2,4]-oxadiazole which bind TIPRAIP and can accordingly be used to raise antibodies useful for drug discovery. Alternatively, labeled 3-(4-azidophenyl)-5-(3-chloro-thiophen-2-yl)-[1,2,4]-oxadiazole (or a labeled substituted 3-aryl-5-aryl-[1,2,4]-oxadiazole) is used for competitive binding assays for drug discovery. Such assays afford high throughput screening of chemical libraries for apoptosis activators.

L41 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:934509 CAPLUS Full-text

DOCUMENT NUMBER: 141:406033

TITLE: Method of treating a disease responsive to induction of the caspase cascade by administering a compound which binds to apoptosis inducing proteins

INVENTOR(S): Kasibhatla, Shailaja; Cai, Sui Xiong; Tseng, Ben; Jessen, Katayoun Alavi; Maliartchouk, Serguei; English, Nicole Marion; Jiang, Songchun; Sirisoma, Nilantha Sudath; Zhang, Han-Zhong; Kuemmerle, Jared

PATENT ASSIGNEE(S): Cytovia, Inc., USA

SOURCE: PCT Int. Appl., 292 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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 WO 2004094647      A2      20041104      WO 2004-US11915      20040419  
 WO 2004094647      A3      20060817

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,  
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,  
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,  
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,  
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
 ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
 SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,  
 TD, TG

CA 2522700      A1      20041104      CA 2004-2522700      20040419  
 US 2005004026      A1      20050106      US 2004-826909      20040419  
 EP 1620564      A2      20060201      EP 2004-750268      20040419

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

PRIORITY APPLN. INFO.:

US 2003-463649P      P      20030418  
 US 2003-463662P      P      20030418  
 US 2003-484749P      P      20030707  
 US 2003-484750P      P      20030707  
 US 2003-532665P      P      20031229  
 WO 2004-US11915      W      20040419

OTHER SOURCE(S):      CASREACT 141:406033

ED      Entered STN:      06 Nov 2004

AB      The present invention pertains to a method of treating, preventing or ameliorating a disease responsive to induction of the caspase cascade in an animal, comprising administering to the animal a compound which binds specifically to one or more apoptosis inducing proteins (AIPs). AIPs include transferrin receptor related apoptosis inducing proteins (TRRAIPs), Clathrin Heavy Chain Related Apoptosis Inducing Proteins (CHCRAIPs), IQ motif containing GTPase Activating Protein Related Apoptosis Inducing Proteins (IQGAPRAIPs), and Heat Shock Protein Related Apoptosis Inducing Proteins (HSPRAIPs). The present invention also relates to screening methods useful for drug discovery of apoptosis inducing compds. In particular, the screening methodol. relates to using AIPs as a target for the discovery of apoptosis activators useful as anticancer agents. The screening methods of the present invention can employ homogenous or heterogenous binding assays using purified or partially purified AIPs; or whole cell assays using cells with altered levels of one or more AIPs. The invention also contemplates use of gambogic acid or GA-related compds. which bind AIPs and can accordingly be used to raise antibodies useful for drug discovery. Alternatively, labeled GA is used for competitive binding assays for drug discovery. Such assays afford high throughput screening of chemical libraries for apoptosis activators.

L41 ANSWER 5 OF 20      CAPLUS      COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:      2004:143311      CAPLUS      Full-text

DOCUMENT NUMBER:      140:210742

TITLE:      Modulators of RabGGT and methods of use thereof

INVENTOR(S):      Manne, Veeraswamy; Lynch, Mark; Ross-MacDonald, Petra  
 B.; Stouch, Terry; Lange, Naomi; Carroll, Pamela;  
 Fitzgerald, Kevin; Costa, Michael R.; Maxwell, Mark  
 E.; Kindt, Rachel M.; Lackner, Mark R.; Hung, Tak;  
 O'Brien, Carol L.; Zhang, Hai Guang; Brown,  
 Katherine S.; Lee, Jae Moon; Lombardo, Louis J.

PATENT ASSIGNEE(S):      Exelixis, USA; Bristol-Myers Squibb Company

SOURCE:      PCT Int. Appl., 247 pp.

CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004015130	A2	20040219	WO 2003-US25001	20030807
WO 2004015130	A3	20041014		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003259717	A1	20040225	AU 2003-259717	20030807
US 2004142888	A1	20040722	US 2003-638225	20030807
EP 1534862	A2	20050601	EP 2003-785122	20030807
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRIORITY APPLN. INFO.:			US 2002-401604P	P 20020807
			US 2003-476722P	P 20030606
			WO 2003-US25001	W 20030807

ED Entered STN: 22 Feb 2004

AB The present invention provides methods for inducing apoptosis in a cell, the methods generally involving contacting the cell with an agent that reduces the level and/or activity of RabGGT (Rab geranylgeranyl transferase). The present invention further provides methods for treating a disorder related to unwanted cell proliferation in an individual, the methods generally involving administering to the individual an agent that reduces the level and/or activity of RabGGT. The present invention further provides methods for reducing apoptosis in a cell, the methods generally involving increasing the level and/or activity of RabGGT in the cell. The present invention further provides methods for treating disorders associated with excessive apoptosis. The present invention further provides methods for identifying a cell that is amenable to treatment with the methods of the present invention. The present invention further provides methods for modulating a binding event between RabGGT and a RabGGT interacting protein. The present invention further provides a 3-dimensional structure of RabGGT, and methods of use of the structure to identify compds. that modulate RabGGT activity.

L41 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2002:946554 CAPLUS Full-text

DOCUMENT NUMBER: 138:19480

TITLE: Methods of identifying potentially therapeutically selective and effective anti-cancer agents

that are inducers of apoptosis  
 INVENTOR(S): Kasibhatla, Shailaja; Reddy, P. Sanjeeva; **Drewe, John A.**

PATENT ASSIGNEE(S): Cytovia, Inc., USA  
 SOURCE: PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002099378	A2	20021212	WO 2002-US1018	20020116
WO 2002099378	A3	20030227		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG US 2003027229 A1 20030206 US 2002-46548 20020116 PRIORITY APPLN. INFO.: US 2001-294617P P 20010601				

ED Entered STN: 13 Dec 2002

AB Disclosed are methods for identifying potential therapeutically effective anti-cancer agents. In particular, the invention relates to the use of biochem. and cell based screening assays to identify compds. that directly or indirectly activate the apoptosis cascade and further a method for identifying thoses apoptosis inducers that are selective and effective apoptosis agents for use in treating cancer and other therapeutic indications characterized by a lack of appropriate apoptosis. Also disclosed is a method of identifying selective caspase inducers using a cell-line specific primary screen.

L41 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:556258 CAPLUS Full-text

DOCUMENT NUMBER: 138:35539

TITLE: Development of a high-throughput **fluorescence** polarization assay for Bcl-xL

AUTHOR(S): Zhang, Haichao; Nimmer, Paul; Rosenberg, Saul H.; Ng, Shi-Chung; Joseph, Mary

CORPORATE SOURCE: Pharmaceutical Products Division, Cancer Research, Department 4N6, Abbott Laboratories, Abbott Park, IL, 60064 USA, USA

SOURCE: Analytical Biochemistry (2002), 307(1), 70-75

CODEN: ANBCA2; ISSN: 0003-2697

PUBLISHER: Elsevier Science

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 26 Jul 2002

AB Antiapoptotic protein Bcl-xL has been demonstrated to play a very important role in a variety of diseases such as cancer. Its biol. function can be inhibited by proapoptotic proteins such Bak, Bad, and Bax by forming complexes mediated primarily by the Bcl-2 homol. 3 (BH3) domain. To facilitate drug discovery for Bcl-xL inhibitors, we have developed and optimized a fluorescence polarization assay based on the interaction between Bcl-xL and BH3 domain peptides. We observed that the fluorescein-labeled Bad BH3 peptide [NLWAAQRYGRELRRMSDK(fluorescein)FVD or fluorescent Bad peptide] generates best overall results. Fluorescent Bad peptide interacts strongly with Bcl-xL with a Kd of 21.48 nM. The assay is stable over a 24-h period and can tolerate the presence of DMSO up to 8%. By using a competition assay, several peptides derived from the BH3 region of Bak, Bad, Bax, and Bcl-2 were investigated. Bad and Bak BH3 peptides compete efficiently with IC50 values of 0.048 and 1.14  $\mu$ M, resp., while the peptides from the BH3 region of Bcl-2 and Bax compete weakly. A mutated Bak peptide, which has been shown to be inactive



for binding to Bcl-xL, did not compete. The relative binding order of the peptides (Bad > Bak > Bcl-2 > Bax > mutated Bak) correlates well with previously published results. When tested in high-throughput formats, the assay has a signal-to-noise ratio of 15.37 and a Z' factor of at least 0.73. The plate-to-plate variability for free peptide control and bound peptide control is minimal. This validates the assay not only for investigating the nature of Bcl-xL-peptide interaction, but also for high-throughput screening of Bcl-xL inhibitors.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:535357 CAPLUS Full-text

DOCUMENT NUMBER: 133:144904

TITLE: Caspase cascade-based methods for identifying therapeutically effective antineoplastic agents, compounds so identified, and pharmaceutical compositions

INVENTOR(S): **Weber, Eckard; Tseng, Ben Y.; Drewe, John; Cai, Sui Xiong**

PATENT ASSIGNEE(S): Cytovia, Inc., USA

SOURCE: PCT Int. Appl., 87 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000045165	A1	20000803	WO 2000-US2329	20000201
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 2000028641	A	20000818	AU 2000-28641	20000201
EP 1151295	A1	20011107	EP 2000-907081	20000201
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			

PRIORITY APPLN. INFO.:  
 US 1999-118102P P 19990201  
 US 1999-454595 A 19991207  
 WO 2000-US2329 W 20000201

ED Entered STN: 04 Aug 2000

AB A method for identifying potentially therapeutically effective antineoplastic compds. comprises determining the ability of test compds. to act as activators of the caspase cascade in viable cultured eukaryotic cells having an intact cell membrane and expressing a cancer phenotype, wherein a test compound that enhances caspase cascade activity is determined to have potential therapeutic efficacy. The method specifically differentiates activators of the caspase cascade from non-specific cell poisons. A therapeutic method useful to modulate in vivo apoptosis or in vivo neoplastic disease, comprising administering to a subject an effective amount of a compound identified as a caspase cascade activator, is provided. Compds., pharmaceutical compns. and a kit for performing the therapeutic method are further provided.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:84633 CAPLUS Full-text

DOCUMENT NUMBER: 132:148494

TITLE: Novel **fluorescence** dyes and their applications for whole cell **fluorescence** screening assays for caspases, peptidases, proteases and other enzymes and the use thereofINVENTOR(S): **Zhang, Han-zhong; Cai, Sui Xiong; Drewe, John A.**; Yang, Wu

PATENT ASSIGNEE(S): Cytovia, Inc., USA

SOURCE: PCT Int. Appl., 174 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000004914	A1	20000203	WO 1999-US16423	19990721
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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EP 1100520	A1	20010523	EP 1999-935751	19990721
EP 1100520	B1	20040922		
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PRIORITY APPLN. INFO.:			US 1998-93642P	P 19980721
			US 1999-357952	A3 19990721
			WO 1999-US16423	W 19990721
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OTHER SOURCE(S): MARPAT 132:148494

ED Entered STN: 04 Feb 2000

AB The present invention relates to novel fluorescent dyes, novel fluorogenic and fluorescent reporter mols., and new enzymes assay processes that can be used to detect the activity of caspases and other enzymes involved in apoptosis in whole cells, cell lines and tissue samples derived from any living organism or organ. The reporter mols. and assay processes can be used in drug screening procedures to identify compds. which act as inhibitors or inducers of the caspase cascade in whole cells or tissues. The reagents and assays described herein are also useful for determining the chemosensitivity of human cancer cells to treatment with chemotherapeutic drugs. The present invention also relates to novel fluorogenic and fluorescent reporter mols. and new enzyme assay processes that can be used to detect the activity of type 2 methionine aminopeptidase, HIV protease, adenovirus protease, HSV-1 protease, HCMV protease and HCV protease. Thus, for example, recombinant Caspase-3 cleaves the substrates N-(Z-Asp-Glu-Val-Asp)-N'-pentafluorobenzoyl-Rhodamine 110 and N-(Ac-Asp-Glu-Val-Asp)-N'-(2,3,4,5-tetrafluorobenzoyl)-Rhodamine 110. Syntheses are provided for the preparation of the substrates comprising

reacting Rhodamine with a substituted benzoyl chloride to give N-substituted benzoyl-Rhodamine, followed by condensing the N-substituted benzoyl-Rhodamine with protected amino acid/peptide derivs. and removal of the protecting groups.

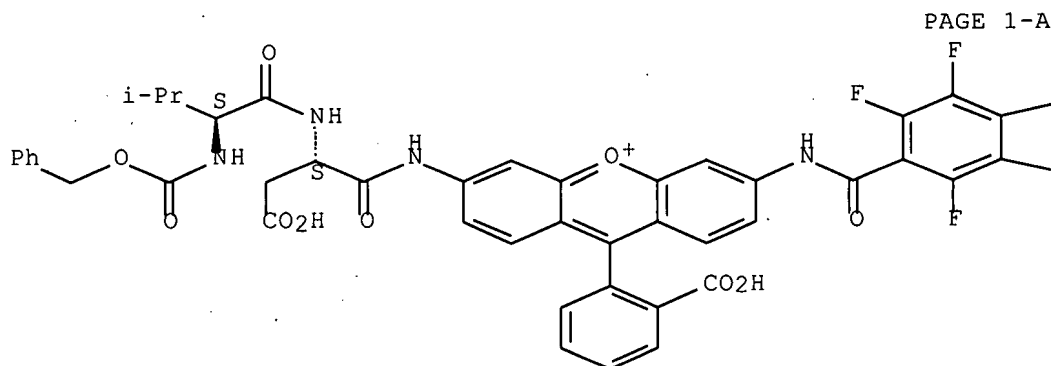
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RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses) (fluorescence dyes and their applications for whole cell fluorescence screening assays for caspases, peptidases, proteases and other enzymes)

RN 256527-30-7 CAPLUS

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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IT 256527-07-8P 256527-09-0P 256527-11-4P  
 256527-13-6P 256527-14-7P 256527-15-8P  
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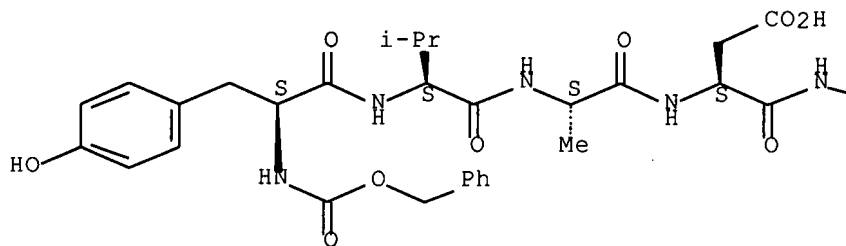
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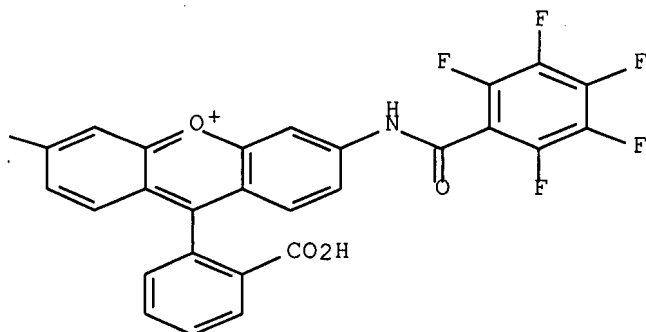
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Absolute stereochemistry.

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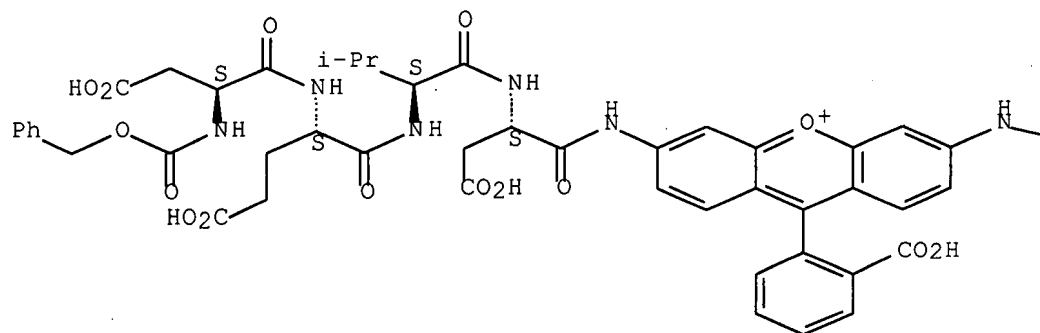


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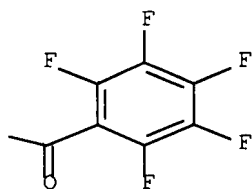
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Absolute stereochemistry.

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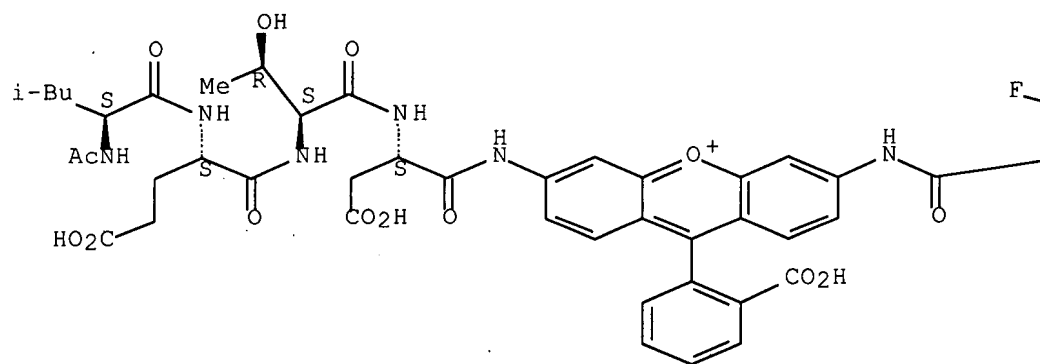


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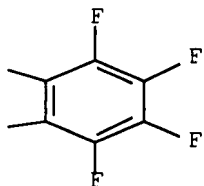
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(CA INDEX NAME)

Absolute stereochemistry.

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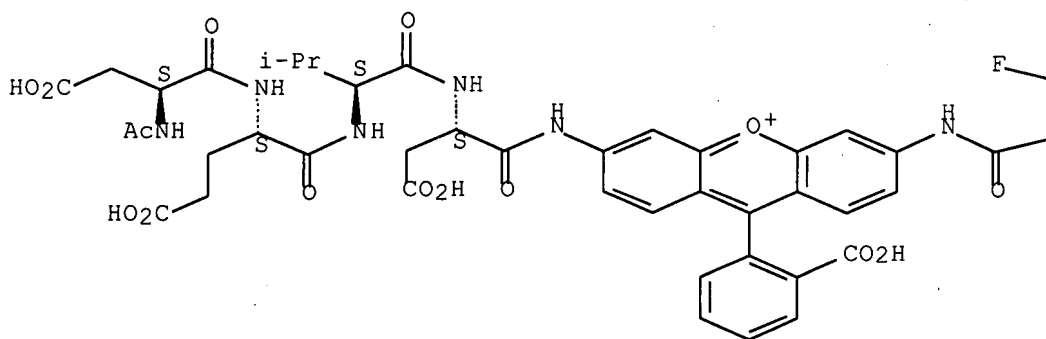


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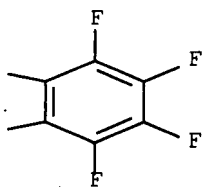
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(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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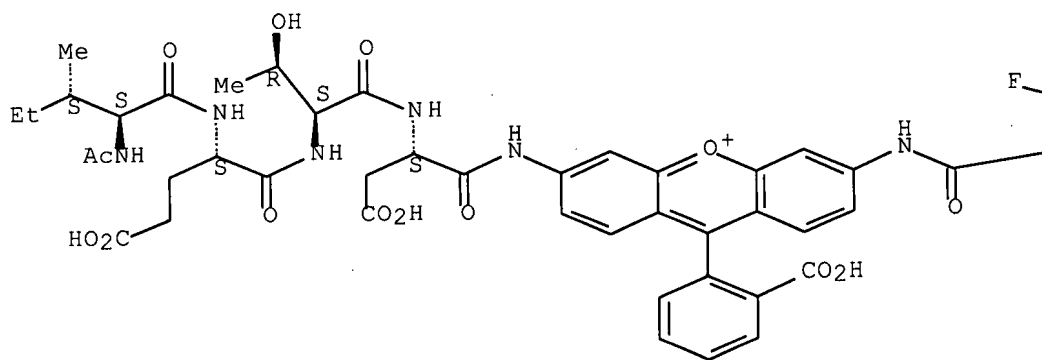


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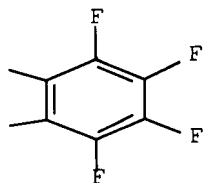
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(CA INDEX NAME)

Absolute stereochemistry.

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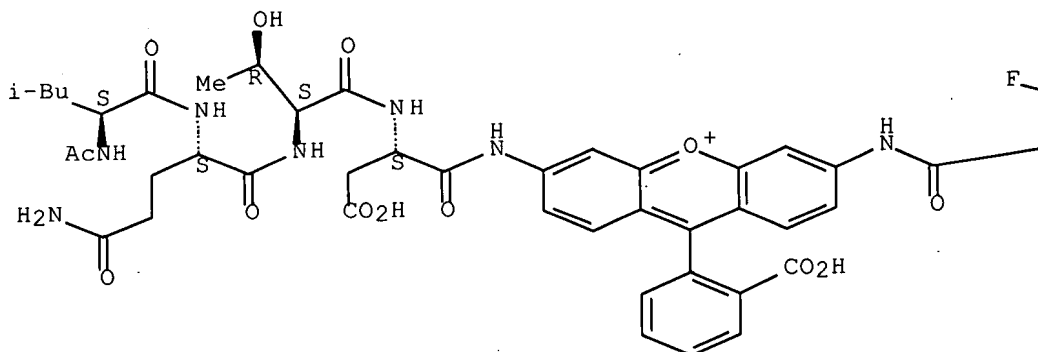


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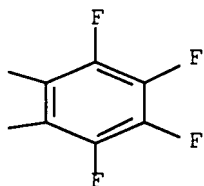
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Absolute stereochemistry.

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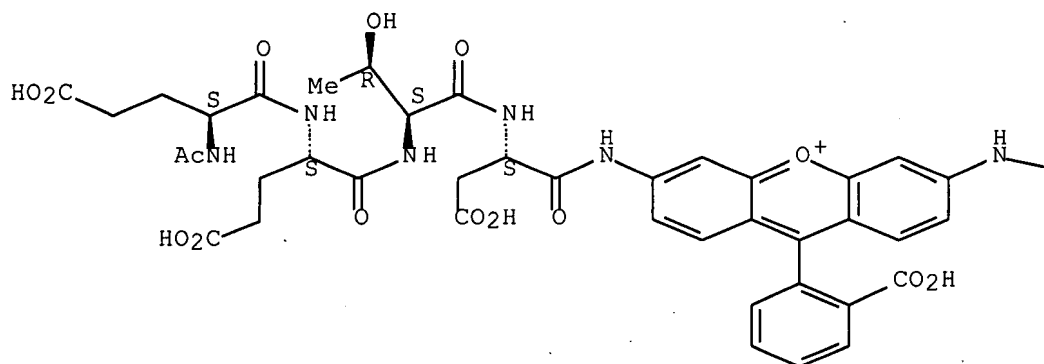


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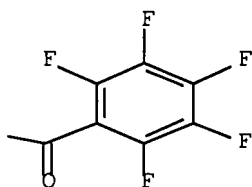
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Absolute stereochemistry.

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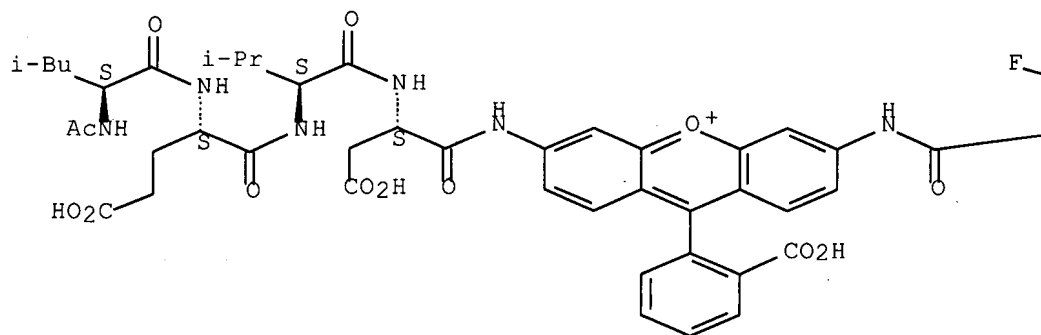
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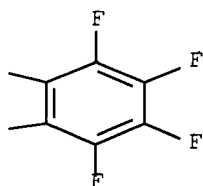
Absolute stereochemistry.



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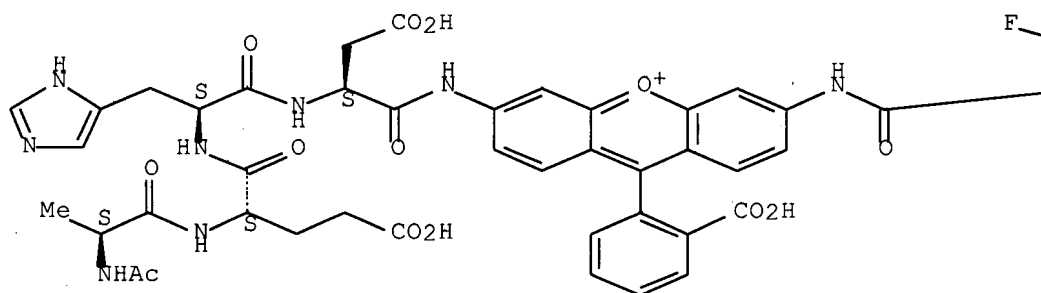


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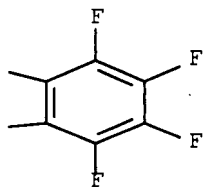
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(CA INDEX NAME)

Absolute stereochemistry.

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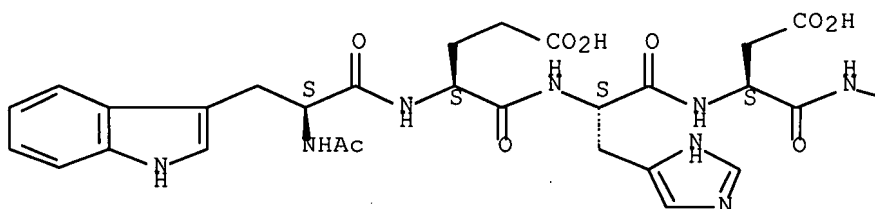


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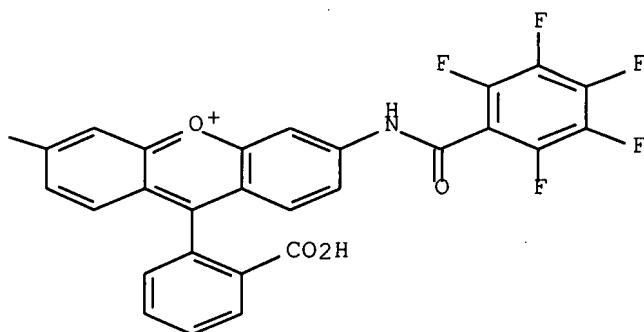
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(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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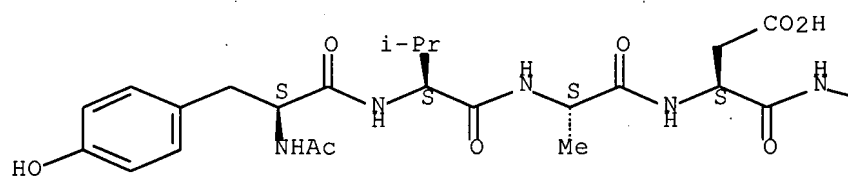


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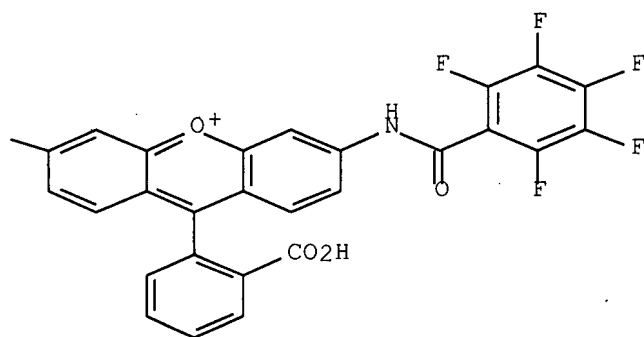
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INDEX NAME)

Absolute stereochemistry.

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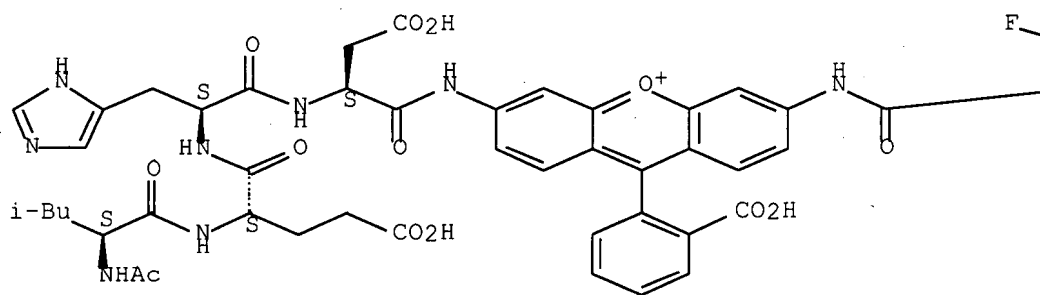


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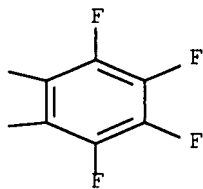
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(CA INDEX NAME)

Absolute stereochemistry.

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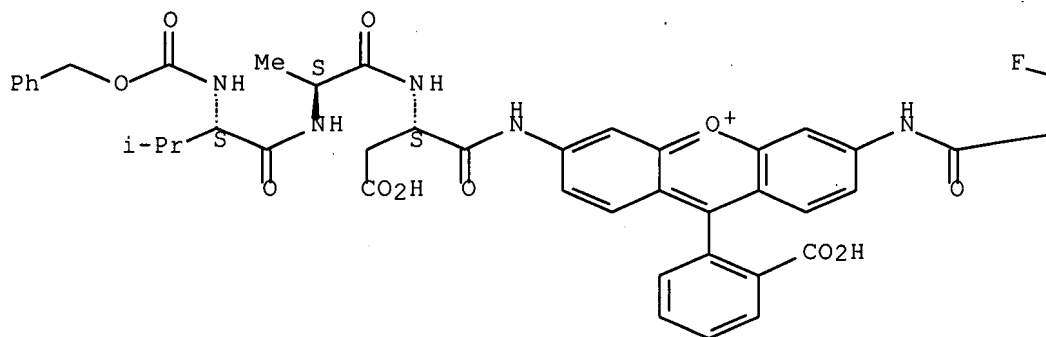


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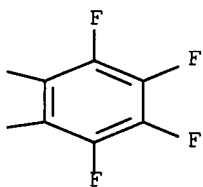
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Absolute stereochemistry.

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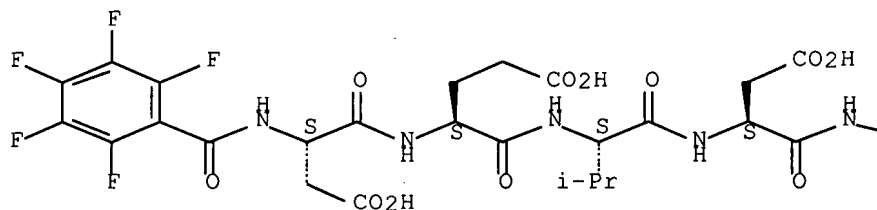


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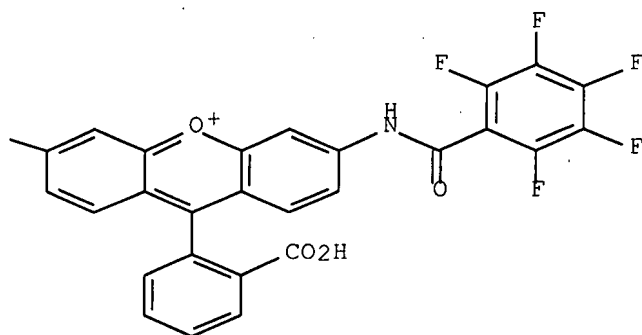
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Absolute stereochemistry.

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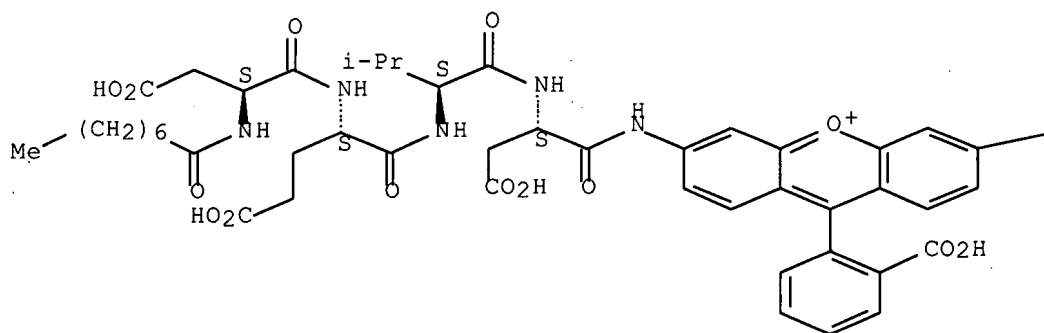


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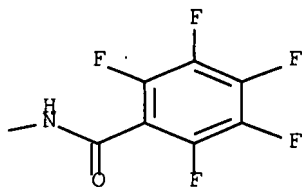
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Absolute stereochemistry.

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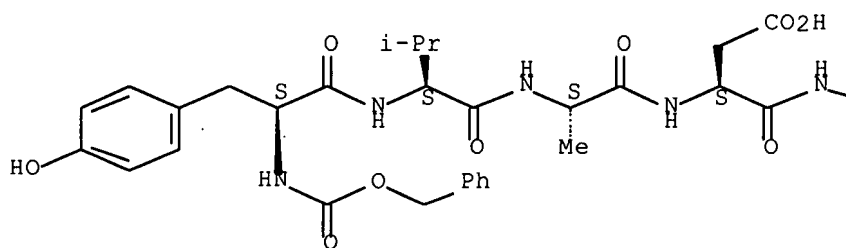


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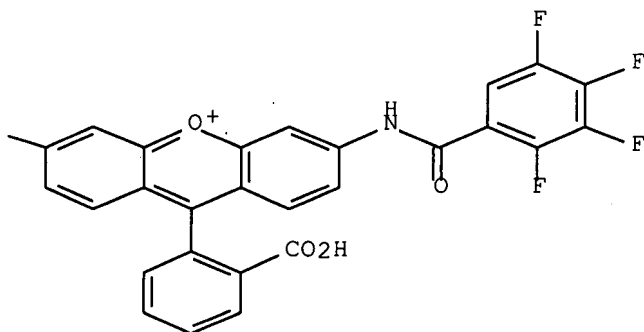
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Absolute stereochemistry.

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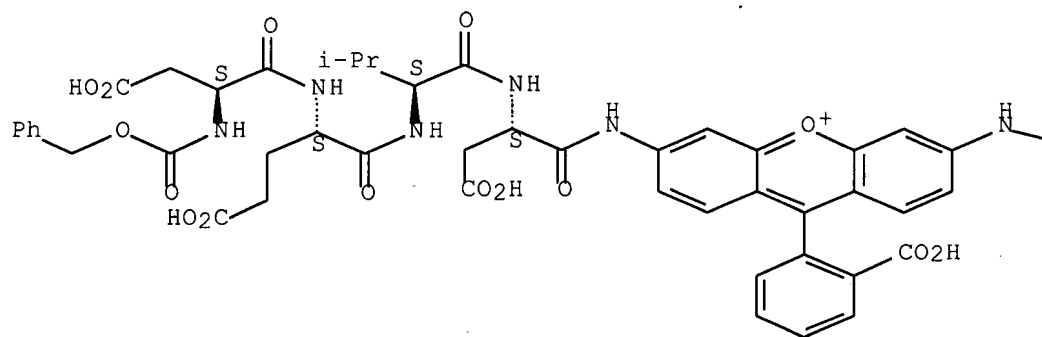


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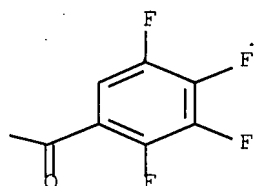
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Absolute stereochemistry.

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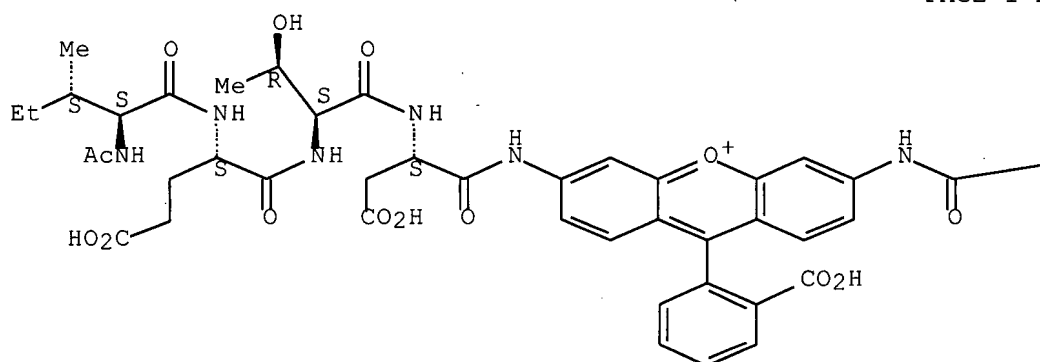


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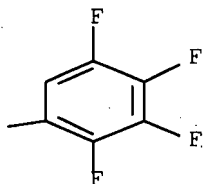
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Absolute stereochemistry.

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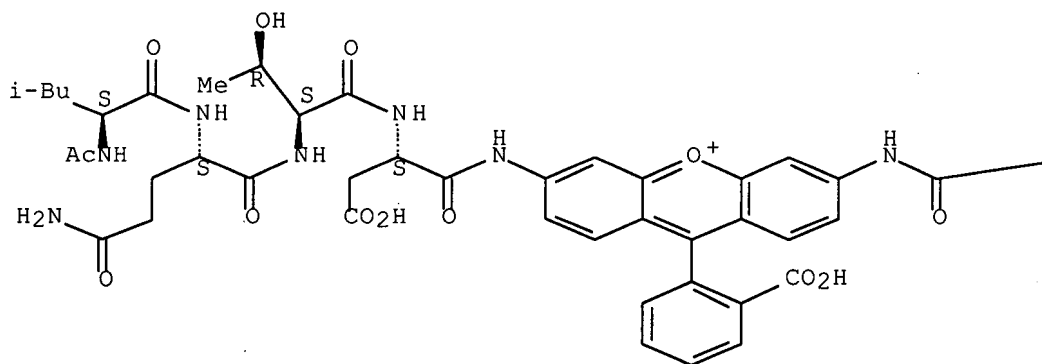


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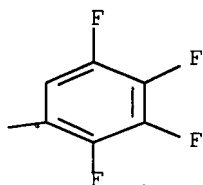
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Absolute stereochemistry.

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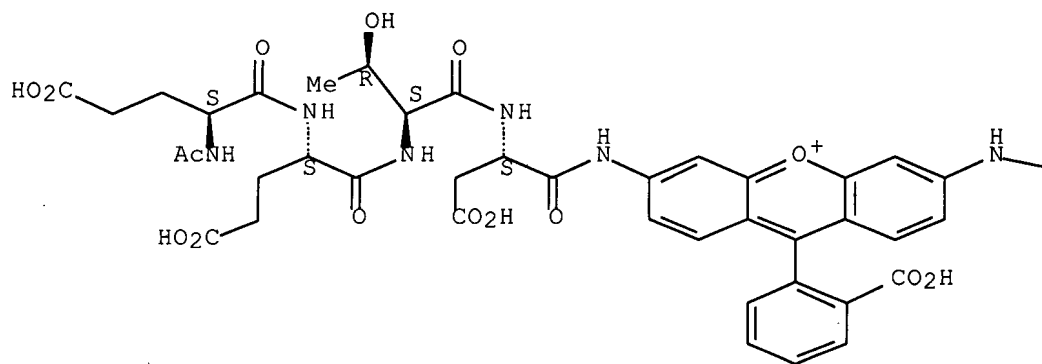
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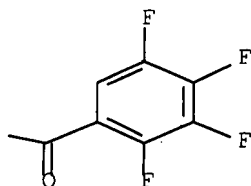
Absolute stereochemistry.



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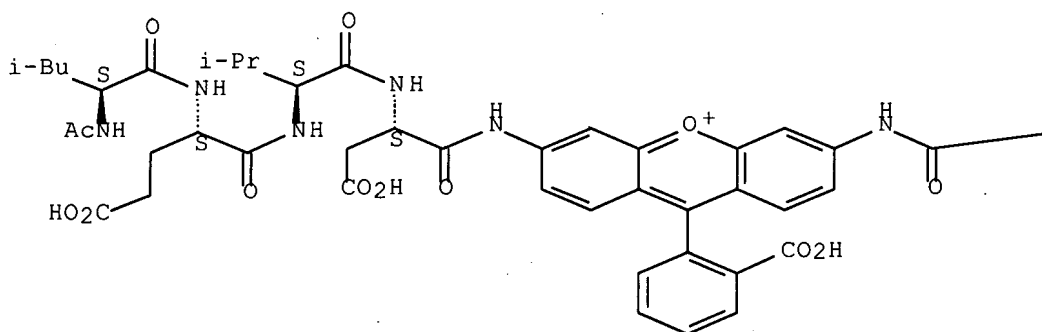


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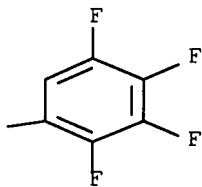
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Absolute stereochemistry.

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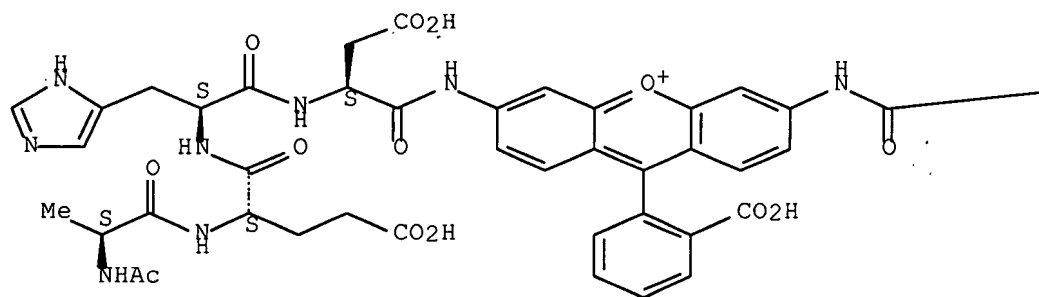


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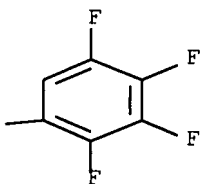
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Absolute stereochemistry.

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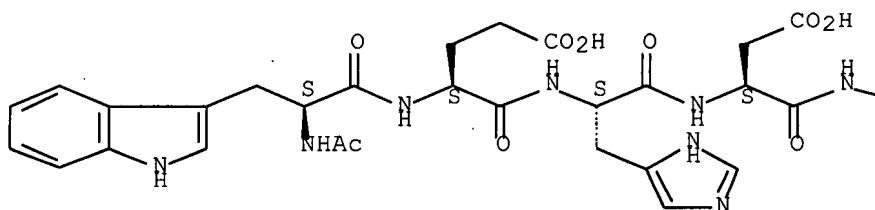


RN 256527-43-2 CAPLUS

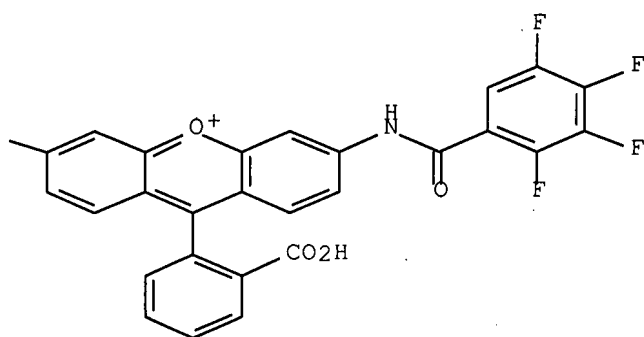
CN L- $\alpha$ -Asparagine, N-acetyl-L-tryptophyl-L- $\alpha$ -glutamyl-L-histidyl-N-[9-(2-carboxyphenyl)-6-[(2,3,4,5-tetrafluorobenzoyl)amino]xanthylum-3-yl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

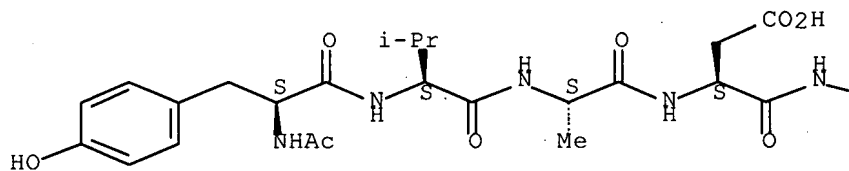


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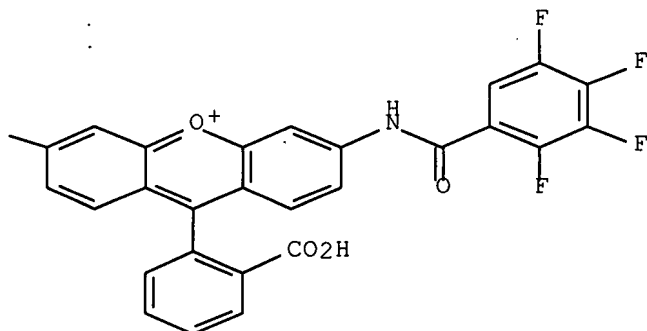
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Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

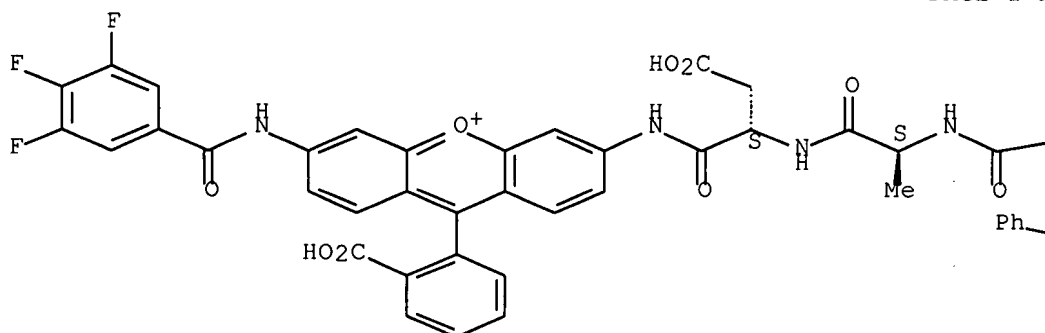


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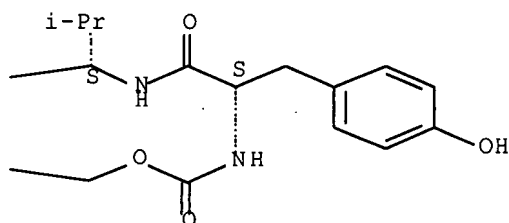
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-tyrosyl-L-valyl-L-alanyl-N-[9-(2-carboxyphenyl)-6-[(3,4,5-trifluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

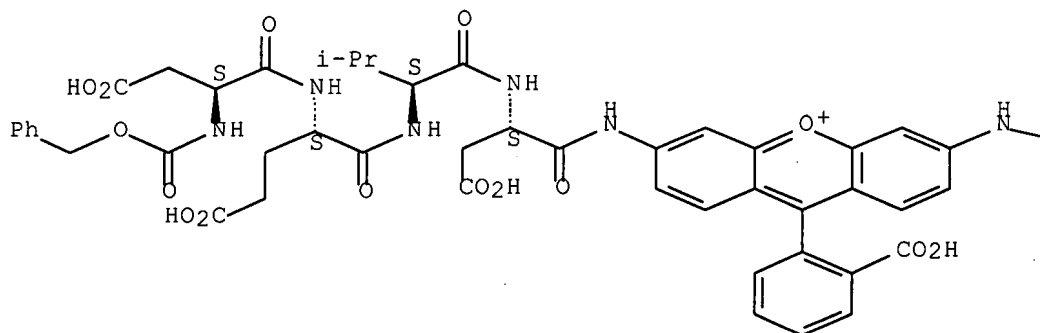


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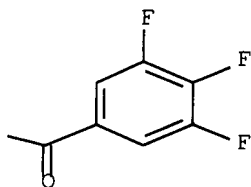
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(3,4,5-trifluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

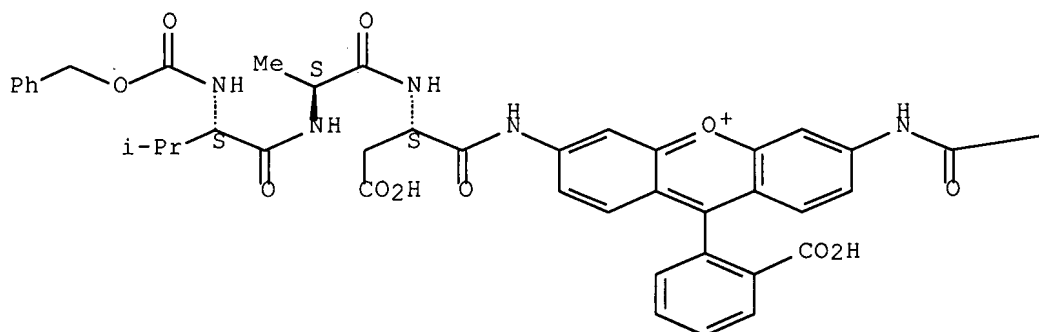


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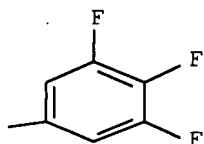
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-L-alanyl-N-[9-(2-carboxyphenyl)-6-[(3,4,5-trifluorobenzoyl)amino]xanthylum-3-yl]- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

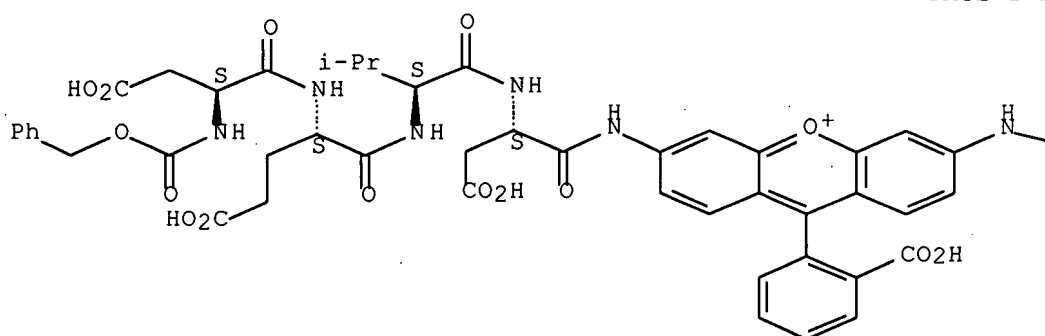


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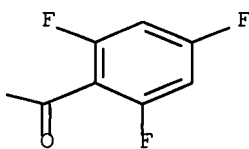
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(2,4,6-trifluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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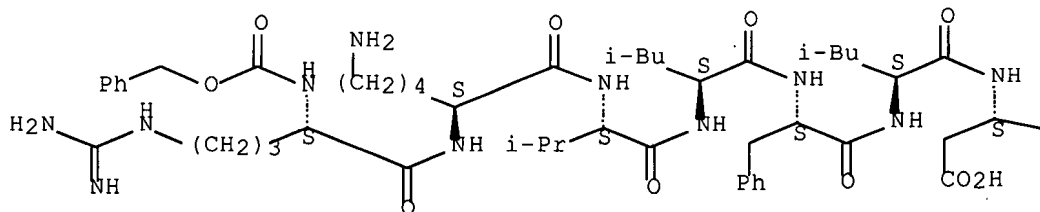


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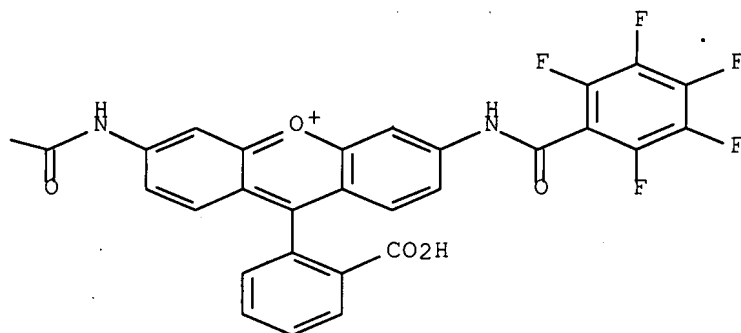
CN L- $\alpha$ -Asparagine, N2-[(phenylmethoxy)carbonyl]-L-arginyl-L-lysyl-L-valyl-L-leucyl-L-phenylalanyl-L-leucyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B



IT 256528-72-0P 256528-75-3P 256528-80-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

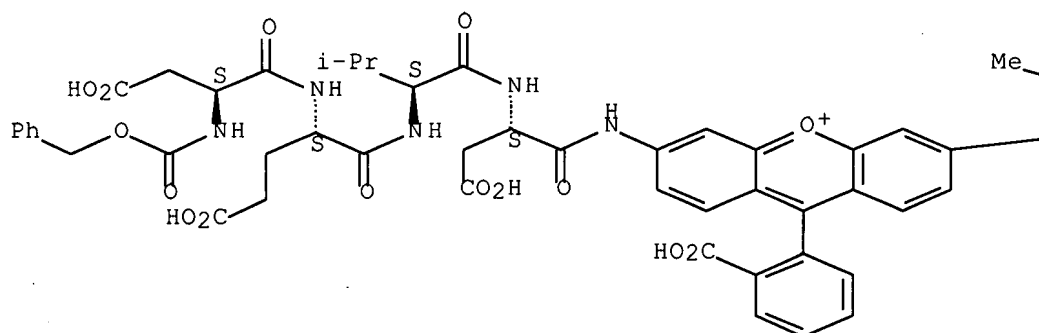
(fluorescence dyes and their applications for whole cell  
fluorescence screening assays for caspases, peptidases,  
proteases and other enzymes)

RN 256528-72-0 CAPLUS

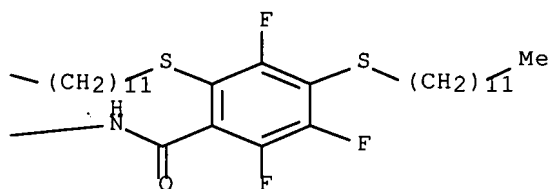
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6-[[2,4-bis(dodecylthio)-3,5,6-trifluorobenzoyl]amino]-9-(2-carboxyphenyl)xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B

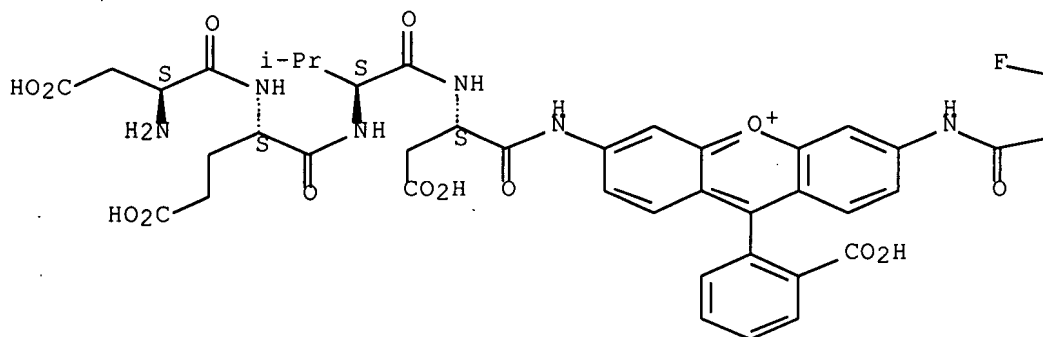


RN 256528-75-3 CAPLUS

CN L- $\alpha$ -Asparagine, L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]-, monohydrobromide (9CI) (CA INDEX NAME)

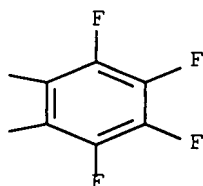
Absolute stereochemistry.

PAGE 1-A



● HBr

PAGE 1-B



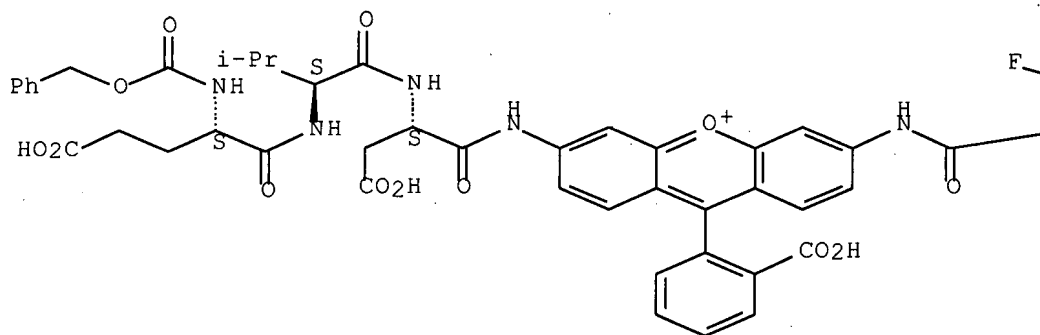
RN 256528-80-0 CAPLUS

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

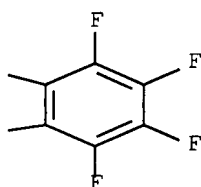
Absolute stereochemistry.



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PAGE 1-B



IT 256527-37-4P

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

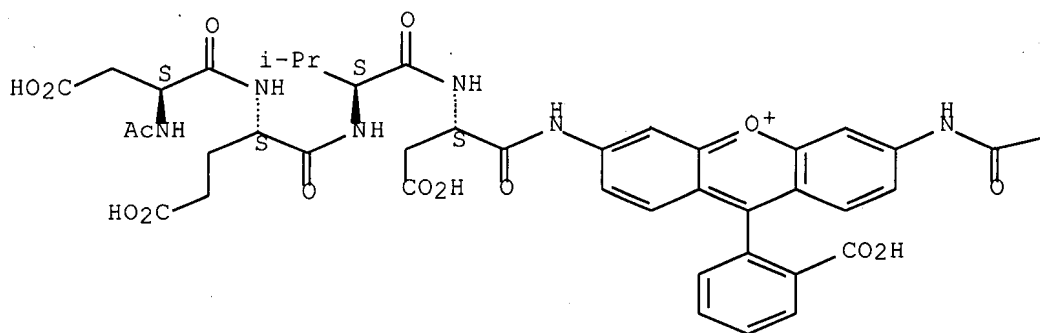
(no counterion specified **fluorescence** dyes and their applications for whole cell **fluorescence** screening assays for caspases, peptidases, proteases and other enzymes)

RN 256527-37-4 CAPLUS

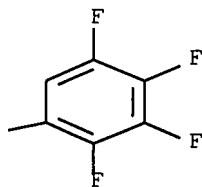
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(2,3,4,5-tetrafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1999:262147 CAPLUS Full-text  
 DOCUMENT NUMBER: 130:308784  
 TITLE: Novel **fluorescent** reporter molecules and their applications including assays for caspases  
 INVENTOR(S): **Weber, Eckard; Cai, Sui Xiong; Keana, John F. W.; Drewe, John A.; Zhang, Han-Zhong**  
 PATENT ASSIGNEE(S): Cytovia, Inc., USA  
 SOURCE: PCT Int. Appl., 203 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9918856	A1	19990422	WO 1998-US21231	19981009
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RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2308125	A1	19990422	CA 1998-2308125	19981009
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US 6335429	B1	20020101	US 2000-521650	20000308
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US 2004191844	A1	20040930	US 2004-829381	20040422
PRIORITY APPLN. INFO.:			US 1997-61582P	P 19971010
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US 1998-145746P	P 19980303
US 1998-168888	A3 19981009
WO 1998-US21231	W 19981009
US 2001-947387	A3 20010907

OTHER SOURCE(S): MARPAT 130:308784

ED Entered STN: 29 Apr 1999

AB The present invention relates to novel fluorescent dyes, novel fluorogenic and fluorescent reporter mols. and new enzyme assay processes that can be used to detect the activity of caspases and other enzymes involved in apoptosis in whole cells, cell lines and tissue samples derived from any living organism or organ. The reporter mols. and assay processes can be used in drug screening procedures to identify compds. which act as inhibitors or inducers of the caspase cascade in whole cells or tissues. The reagents and assays described herein are also useful for determining the chemosensitivity of human cancer cells to treatment with chemotherapeutic drugs. The present invention also relates to novel fluorogenic and fluorescent reporter mols. and new enzyme assay processes that can be used to detect the activity of type 2 methionine aminopeptidase, dipeptidyl peptidase IV, calpain, aminopeptidase, HIV protease, adenovirus protease, HSV-1 protease, HCMV protease and HCV protease. Caspase-3 substrate, N-Ac-DEVD-N'-octyloxycarbonyl Rhodamine 110 (preparation given), was used to stain apoptotic HL-60 cells.

IT 220846-75-3DP, N-blocked 220846-80-0DP, N-blocked  
 223538-39-4DP, N-blocked 223538-40-7DP, N-blocked  
 223538-41-8DP, N-blocked 223538-42-9DP, N-blocked  
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 223538-84-9P 223538-86-1P 223538-90-7P

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)

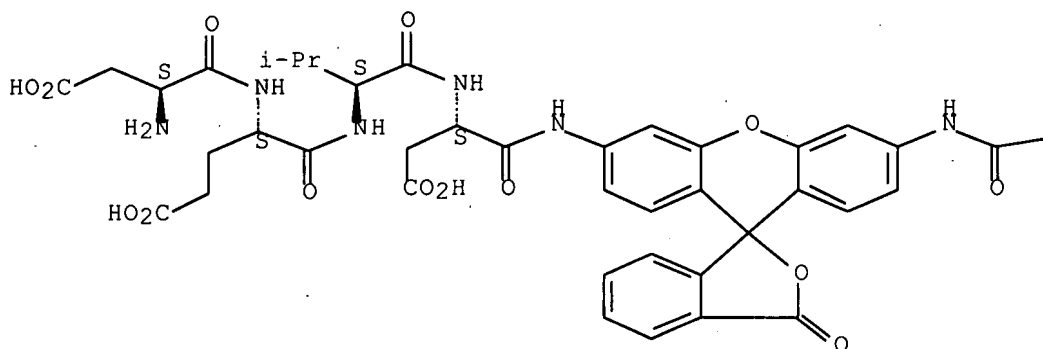
(novel **fluorescent** reporter mols. and their applications including assays for caspases)

RN 220846-75-3 CAPLUS

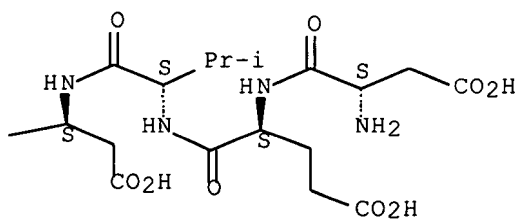
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-(9H)xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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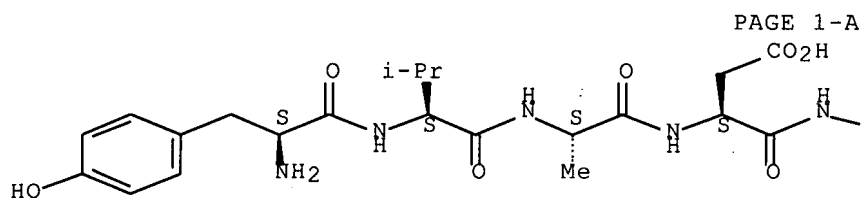
PAGE 1-B



RN 220846-80-0 CAPLUS

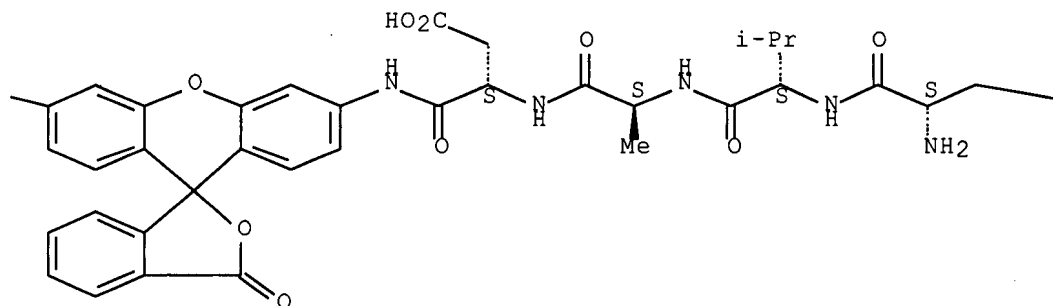
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
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NAME)

Absolute stereochemistry.

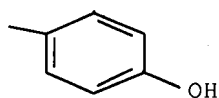


PAGE 1-A

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PAGE 1-C

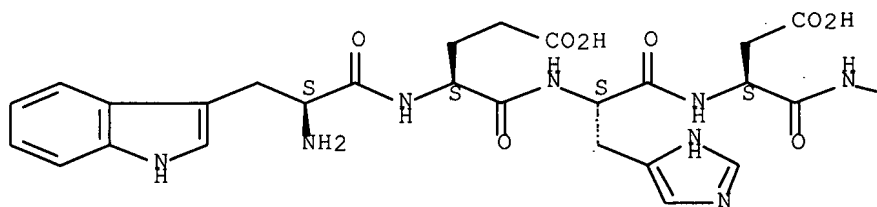


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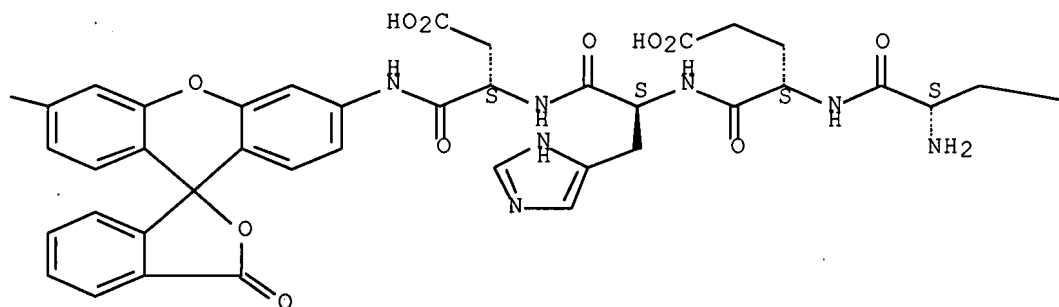
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L-tryptophyl-L- $\alpha$ -glutamyl-L-histidyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

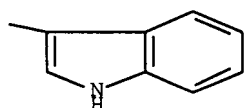
PAGE 1-A



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PAGE 1-C

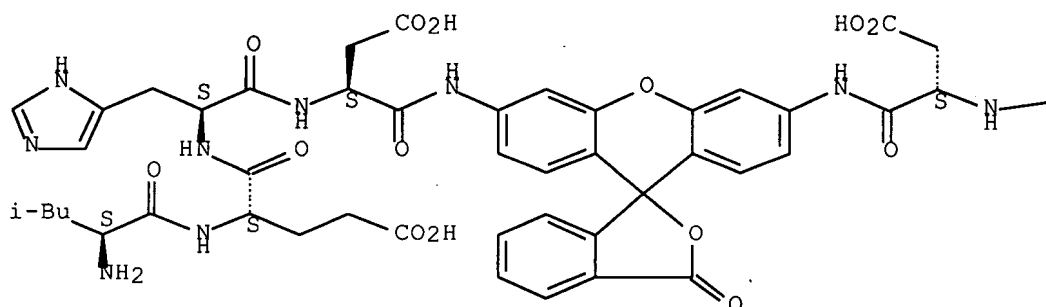


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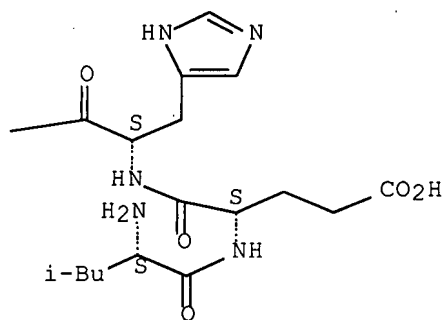
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L-leucyl-L- $\alpha$ -glutamyl-L-histidyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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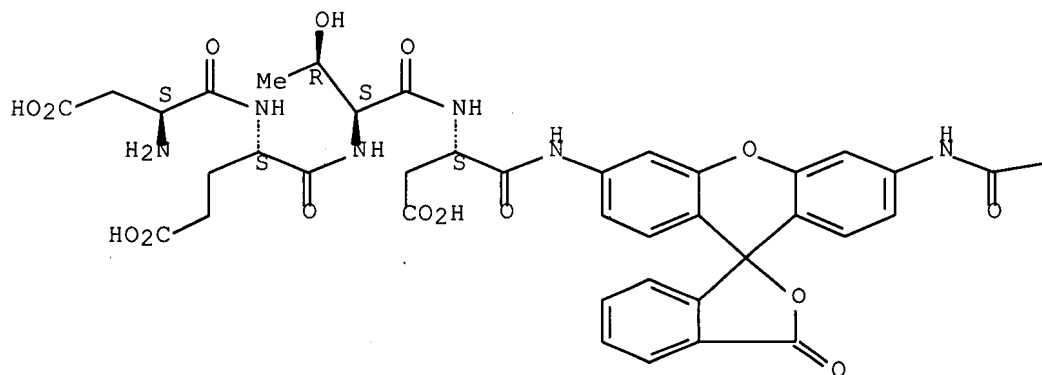


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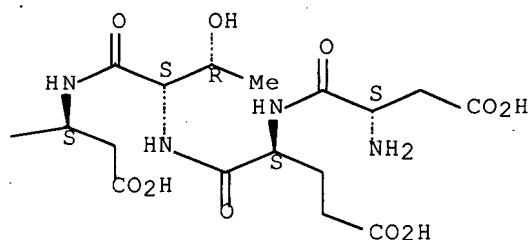
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-threonyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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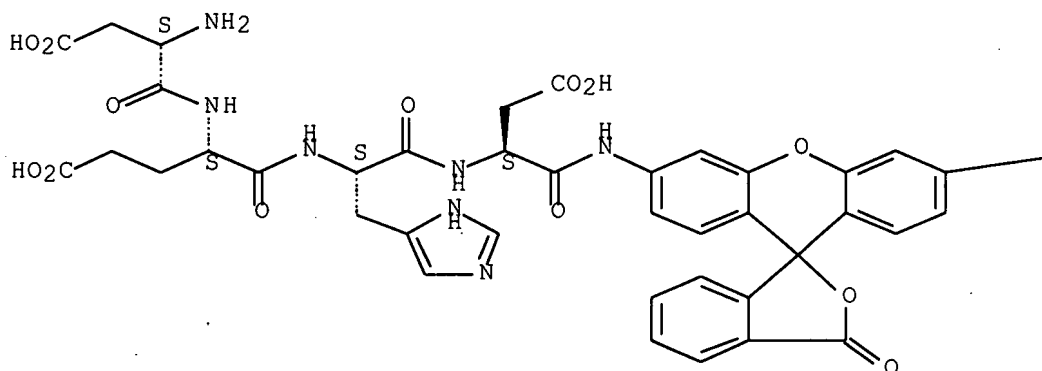
RN 223538-42-9 CAPLUS

CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-

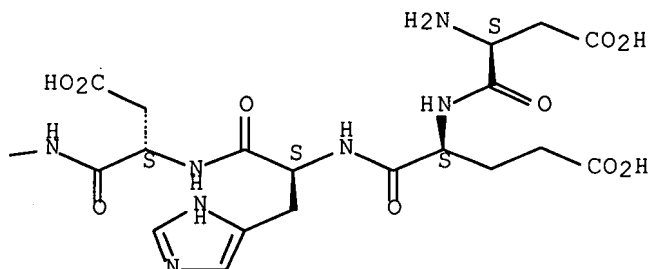
histidyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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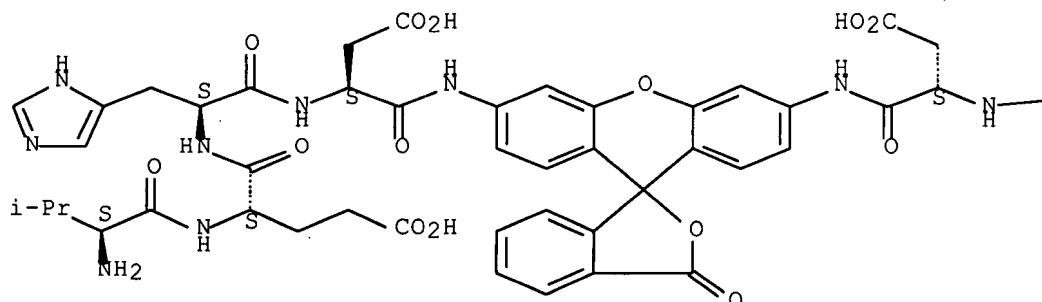


RN 223538-43-0 CAPLUS

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(CA INDEX NAME)

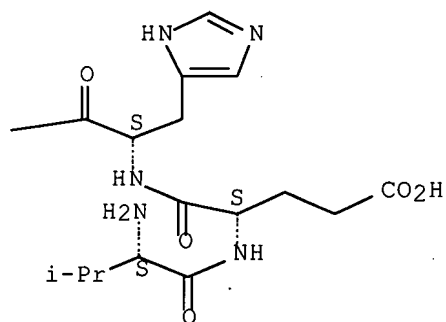
Absolute stereochemistry.

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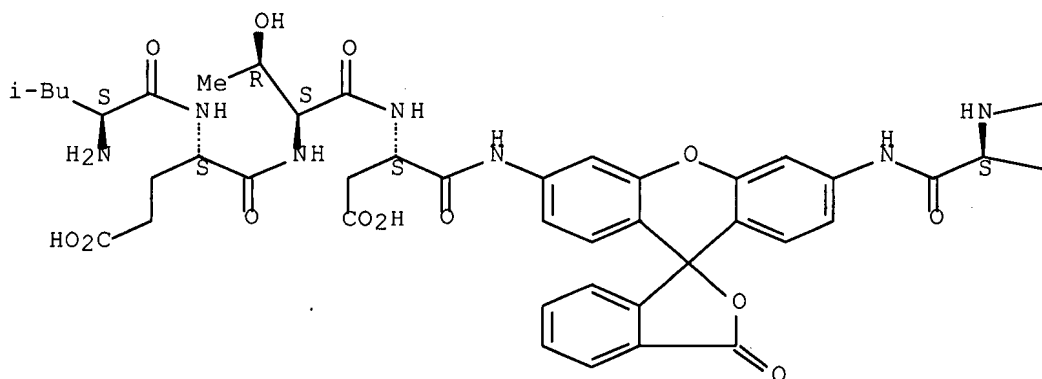


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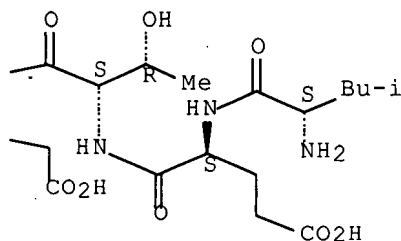
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-leucyl-L- $\alpha$ -glutamyl-L-threonyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B

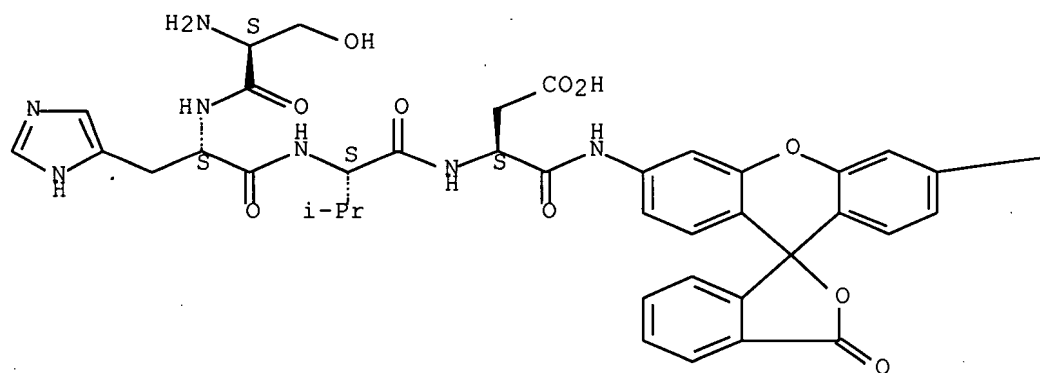


RN 223538-45-2 CAPLUS

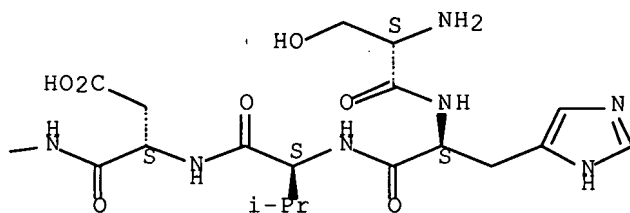
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-seryl-L-histidyl-L-valyl- (9CI) (CA INDEX  
NAME)

Absolute stereochemistry.

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PAGE 1-B

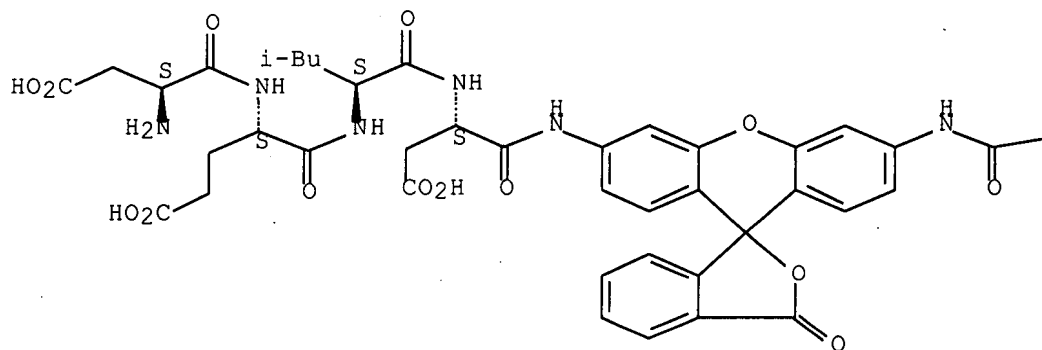


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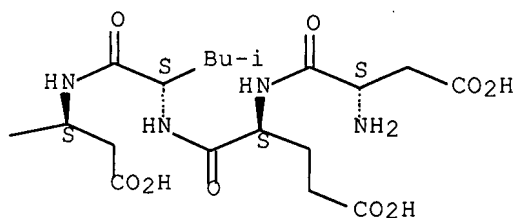
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-  
leucyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B

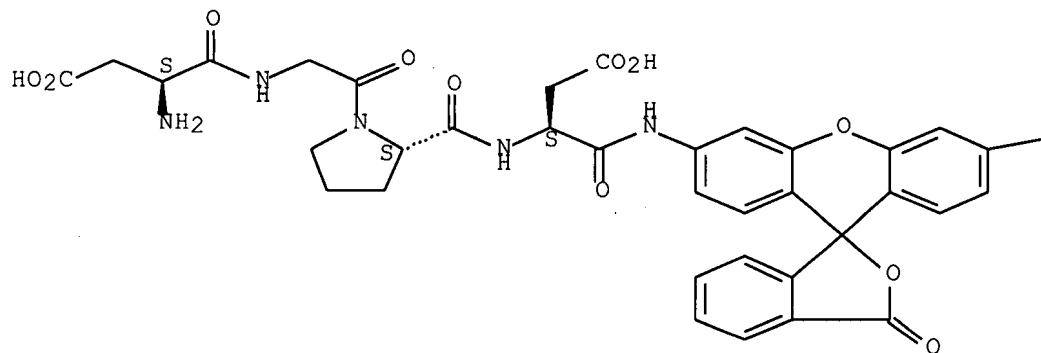


RN 223538-47-4 CAPLUS

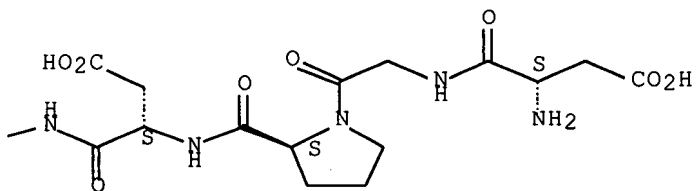
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-(9H)xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartylglycyl-L-prolyl- (9CI) (CA  
INDEX NAME)

Absolute stereochemistry.

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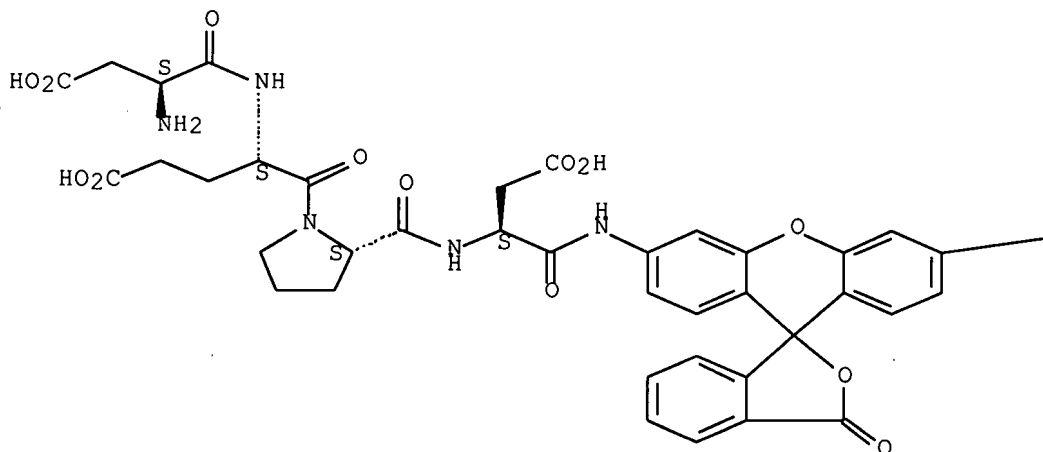


RN 223538-48-5 CAPLUS

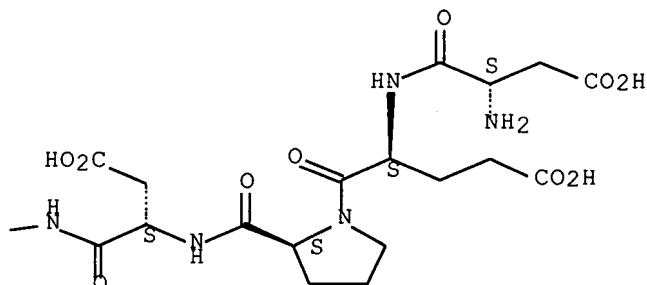
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-(9H)xanthene]-3',6'-diyl)bis[L-α-aspartyl-L-α-glutamyl-L-prolyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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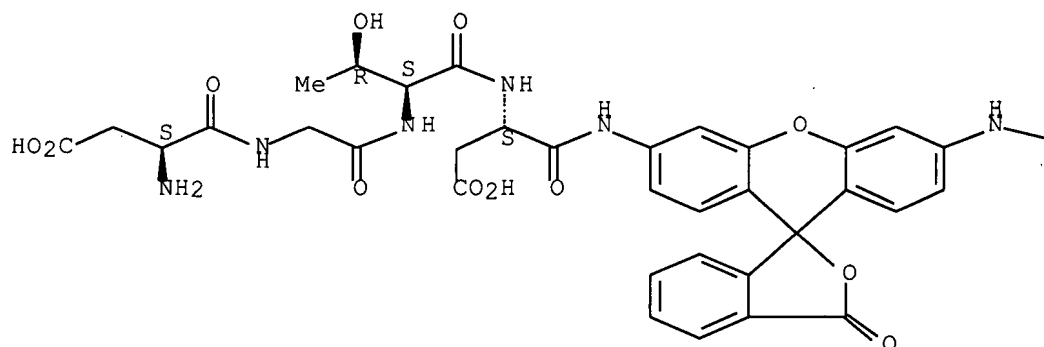


RN 223538-49-6 CAPLUS

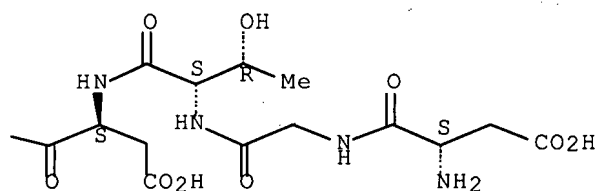
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-(9H)xanthene]-3',6'-diyl)bis[L-α-aspartylglycyl-L-threonyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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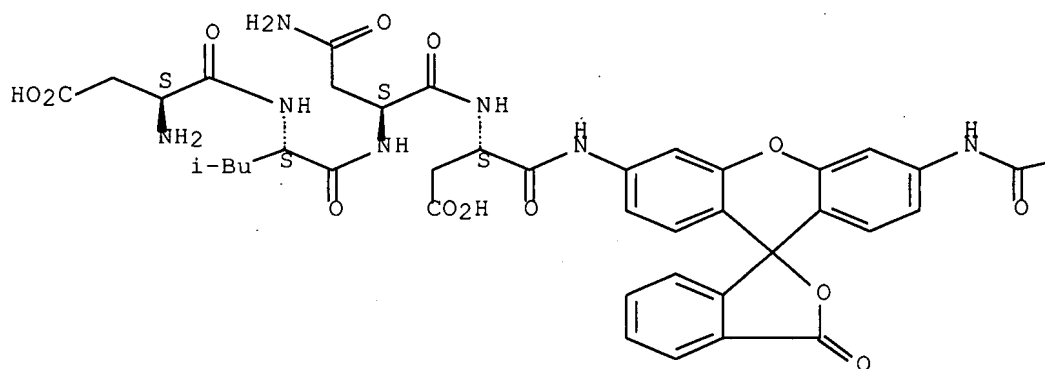


RN 223538-50-9 CAPLUS

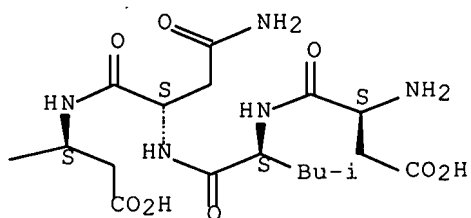
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L-leucyl-L-asparaginyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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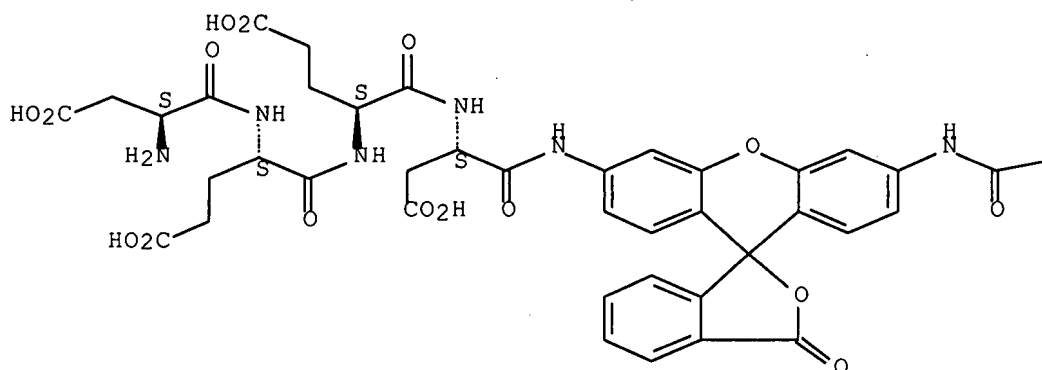


RN 223538-51-0 CAPLUS

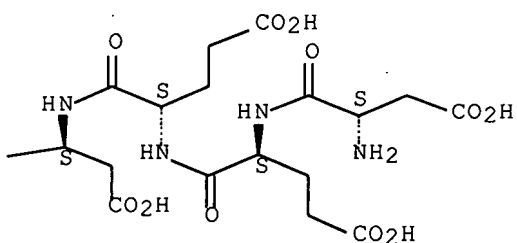
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L- $\alpha$ -glutamyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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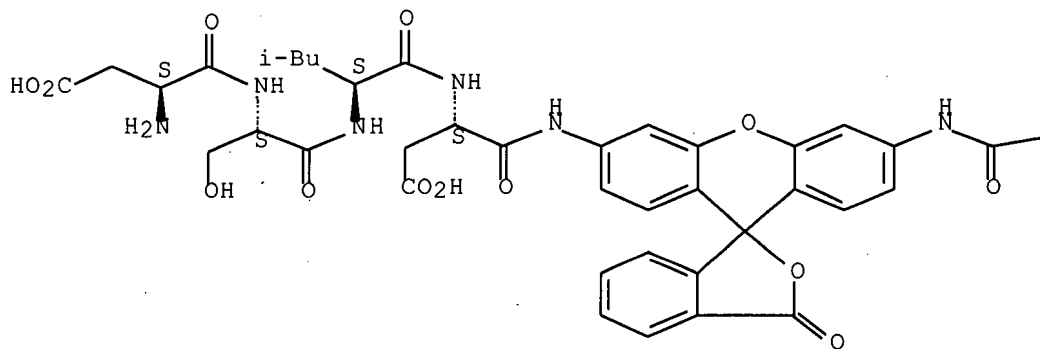


RN 223538-52-1 CAPLUS

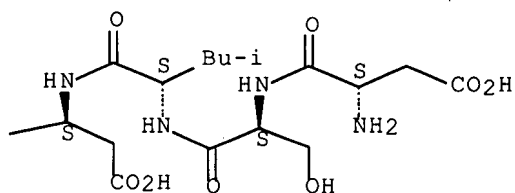
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L-seryl-L-leucyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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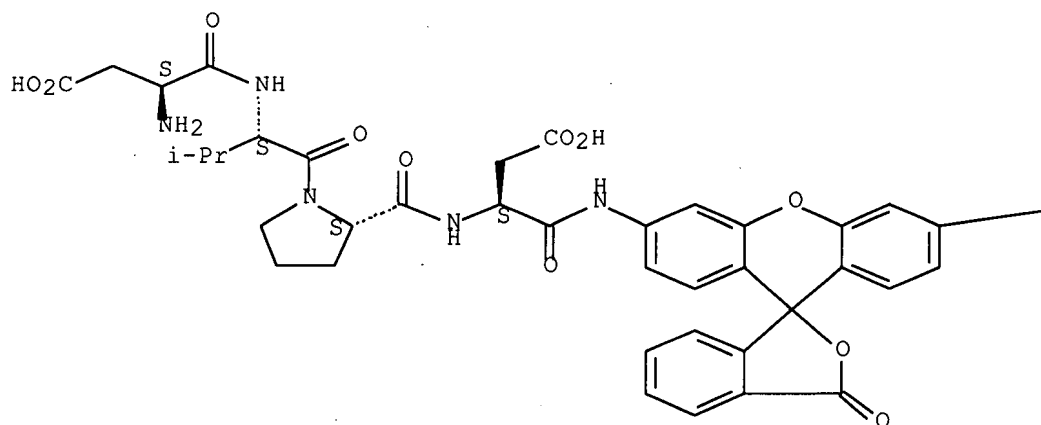


RN 223538-53-2 CAPLUS

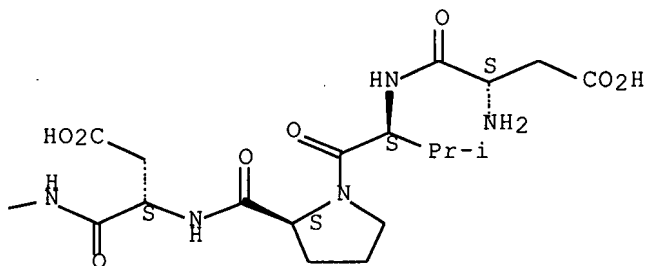
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L-valyl-L-prolyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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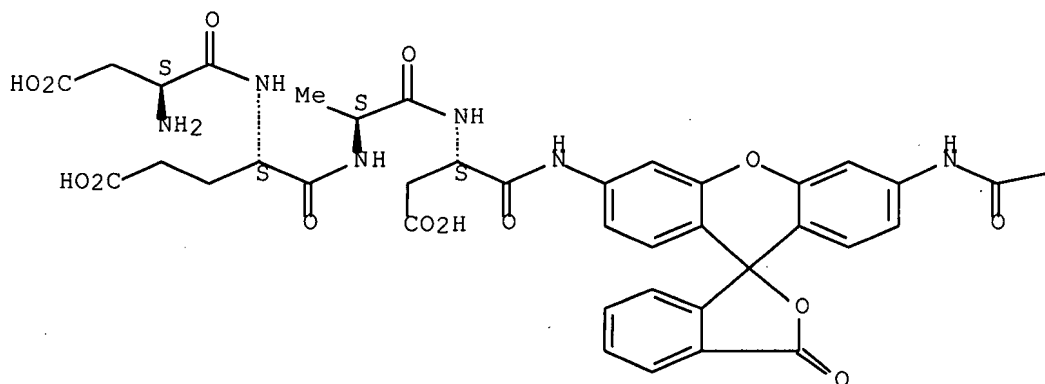


RN 223538-54-3 CAPLUS

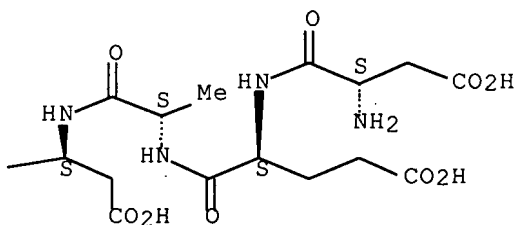
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-(9H)xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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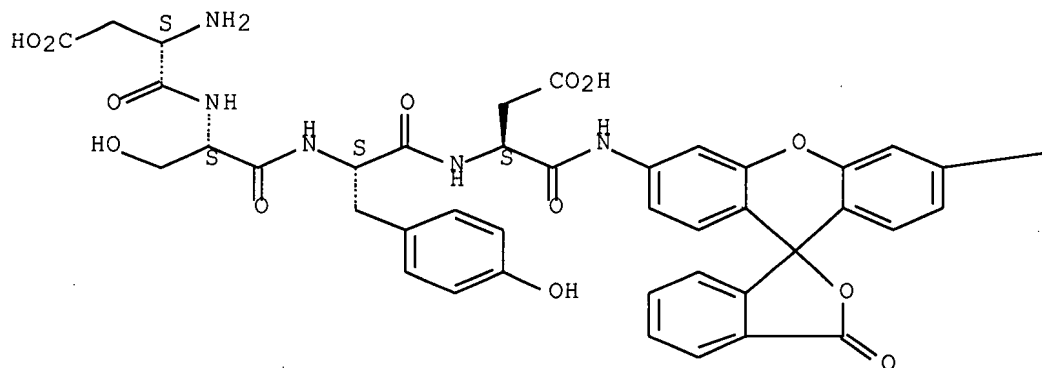
RN 223538-55-4 CAPLUS

CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L-seryl-L-tyrosyl- (9CI)  
(CA INDEX NAME)

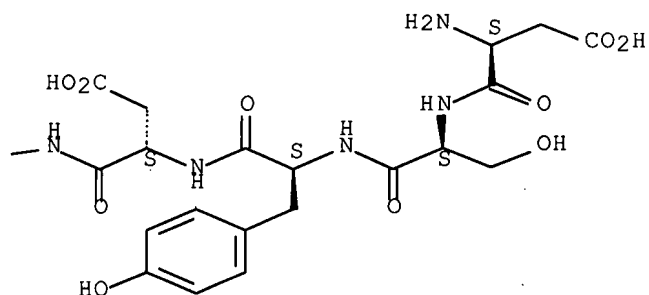
Absolute stereochemistry.



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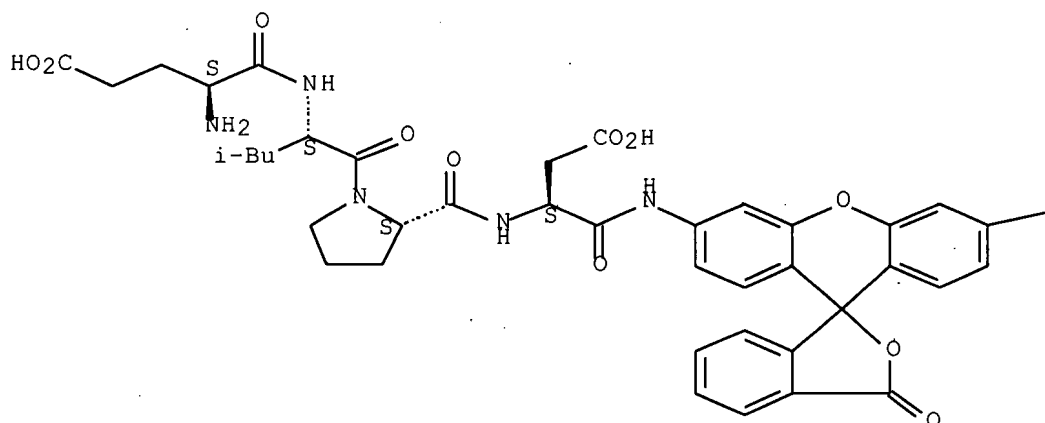


RN 223538-56-5 CAPLUS

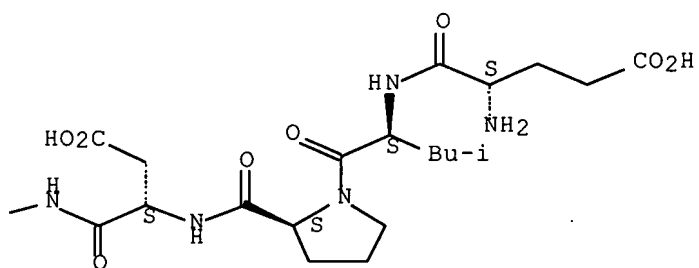
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-α-glutamyl-L-leucyl-L-prolyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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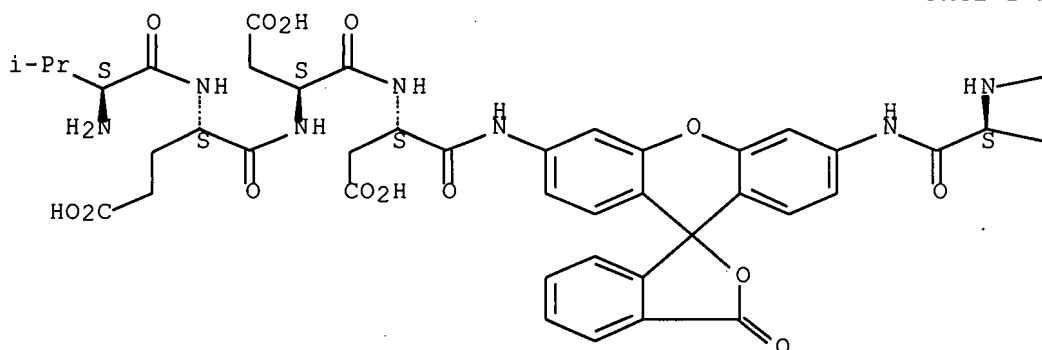


RN 223538-57-6 CAPLUS

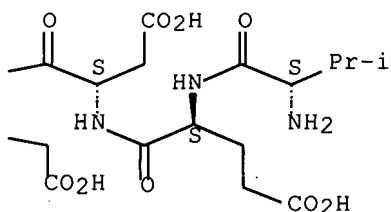
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-valyl-L-α-glutamyl-L-α-aspartyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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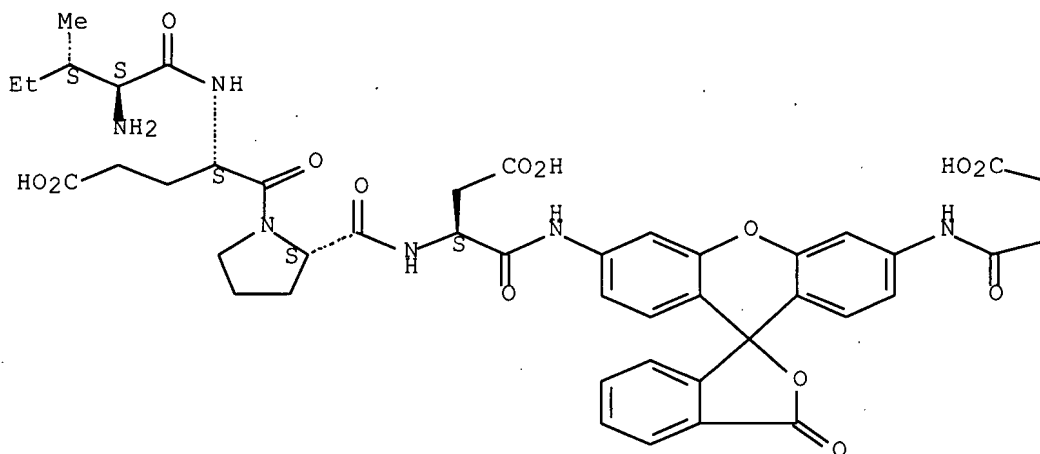


RN 223538-58-7 CAPLUS

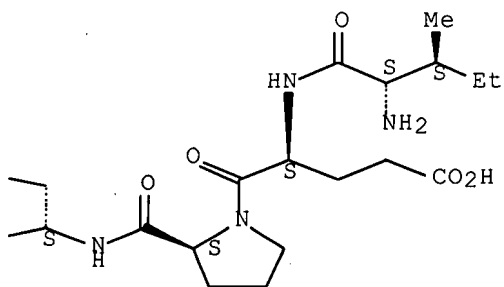
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-isoleucyl-L-α-glutamyl-L-prolyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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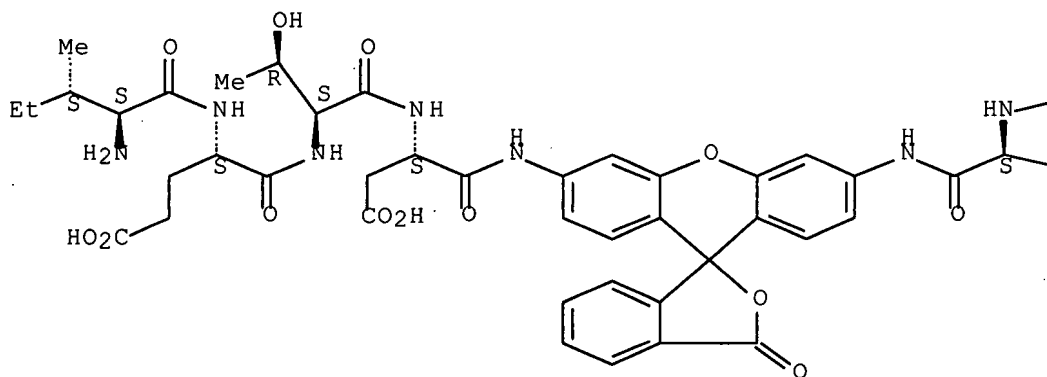


RN 223538-59-8 CAPLUS

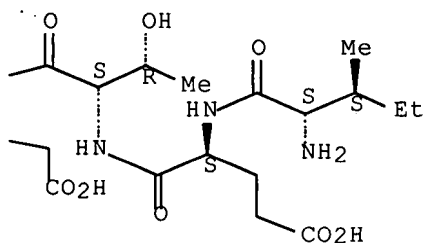
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L-isoleucyl-L- $\alpha$ -glutamyl-L-threonyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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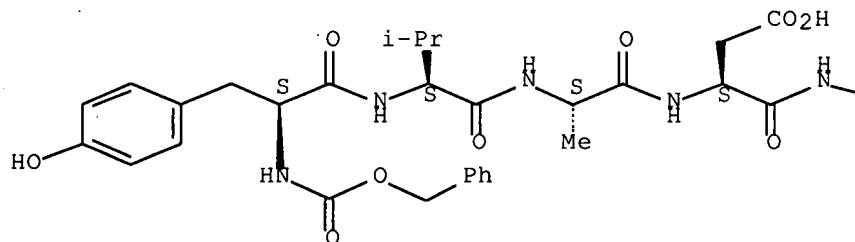


RN 223538-60-1 CAPLUS

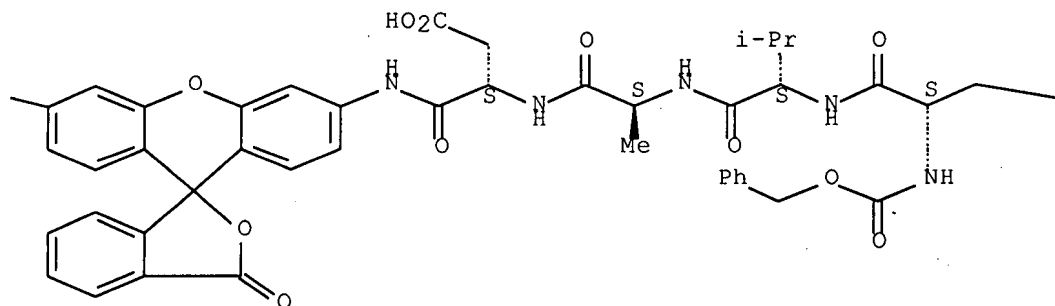
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[N-[(phenylmethoxy)carbonyl]-L-tyrosyl-L-valyl-L-alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

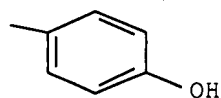
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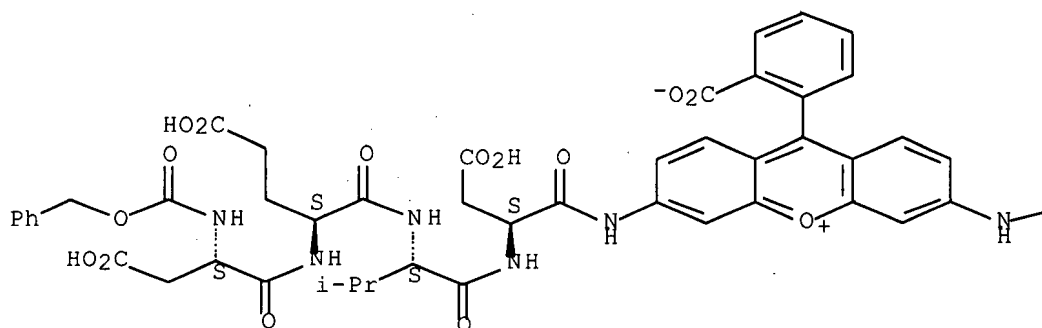


RN 223538-61-2 CAPLUS

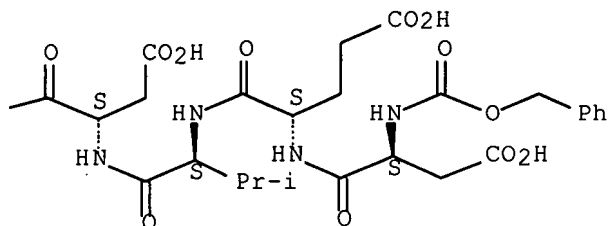
CN L- $\alpha$ -Asparagine, 4,4'-[9-(2-carboxyphenyl)xanthylum-3,6-diyl]bis[N-  
[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-  
(9CI). (CA INDEX NAME)

Absolute stereochemistry.

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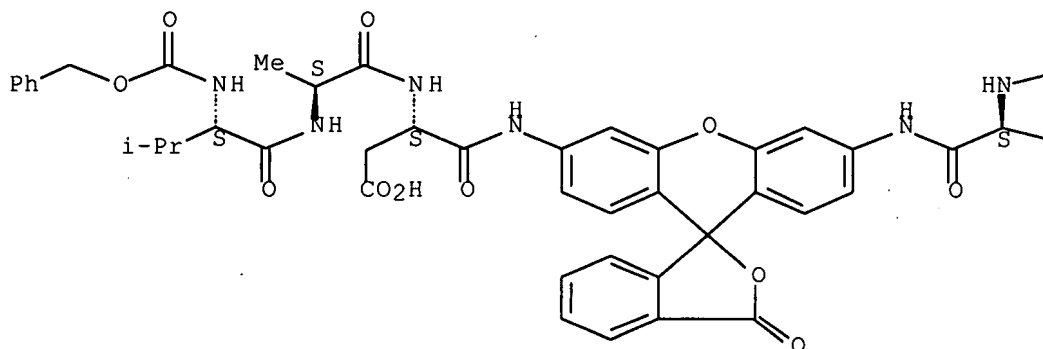


RN 223538-62-3 CAPLUS

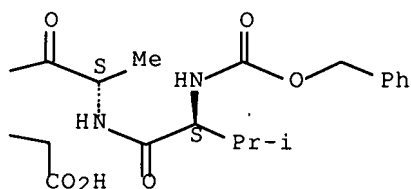
CN L-α-Asparagine, 3,3'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[N-[(phenylmethoxy)carbonyl]-L-valyl-L-alanyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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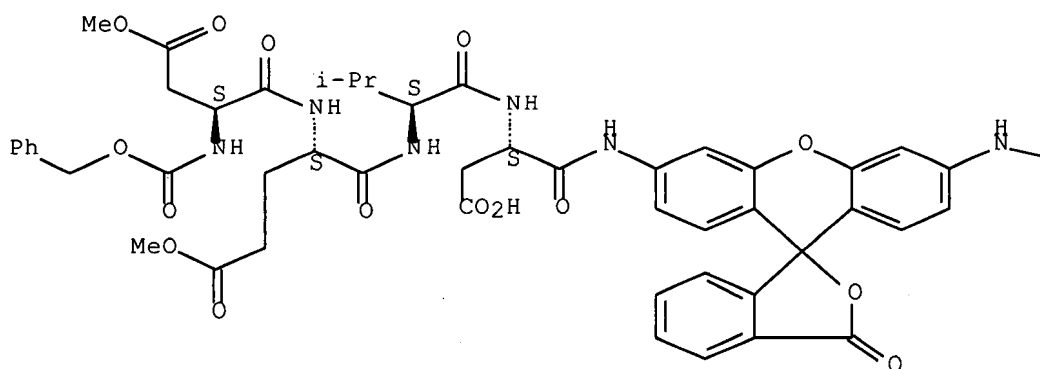


RN 223538-68-9 CAPLUS

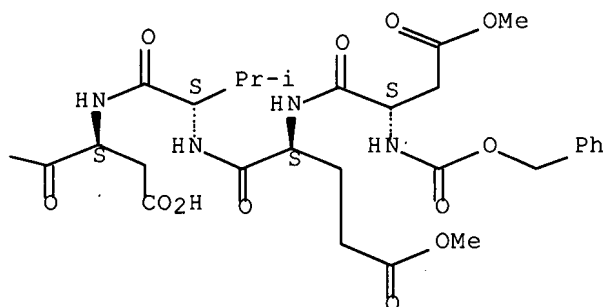
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[N-[(phenylmethoxy)carbonyl]-L-α-  
aspartyl-L-α-glutamyl-L-valyl-, 1,1',2,2'-tetramethyl ester (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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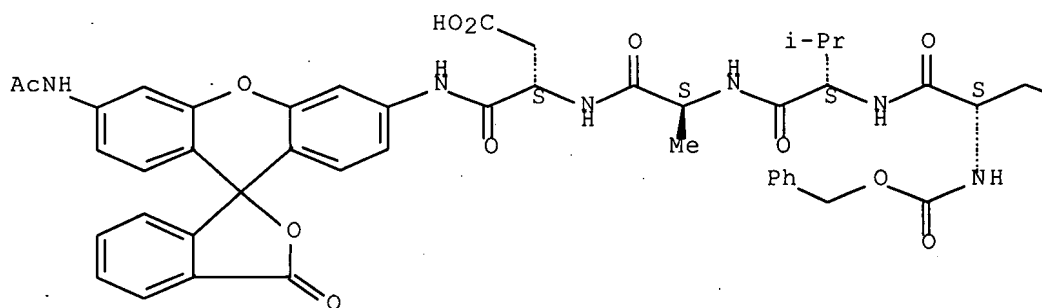


RN 223538-72-5 CAPLUS

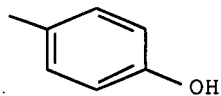
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-tyrosyl-L-valyl-L-alanyl-N-[6'-(acetilamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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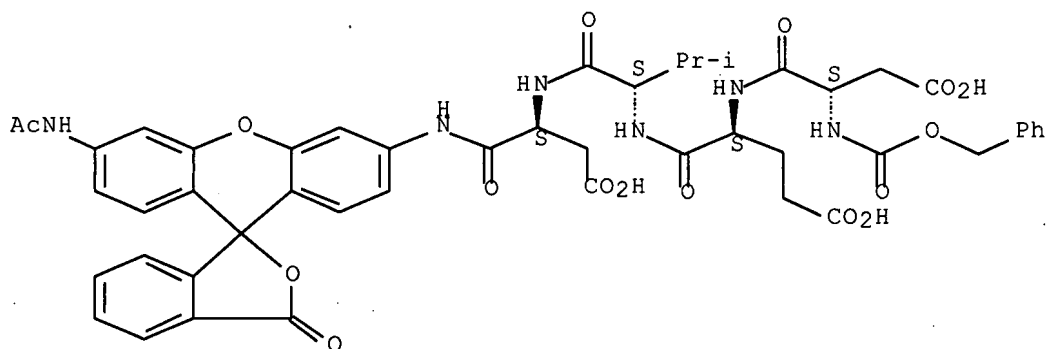
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RN 223538-73-6 CAPLUS

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

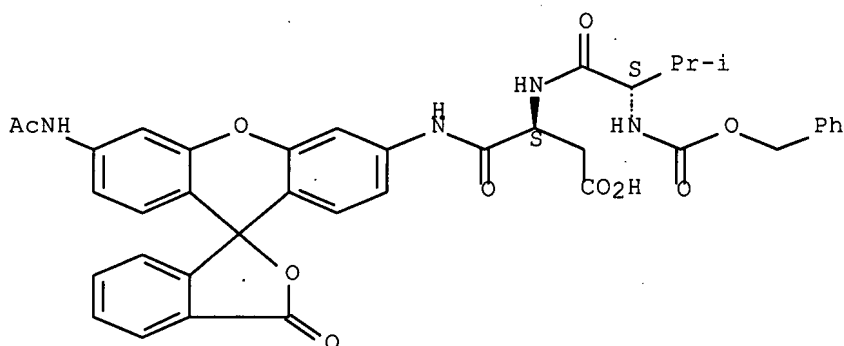
Absolute stereochemistry.



RN 223538-74-7 CAPLUS

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

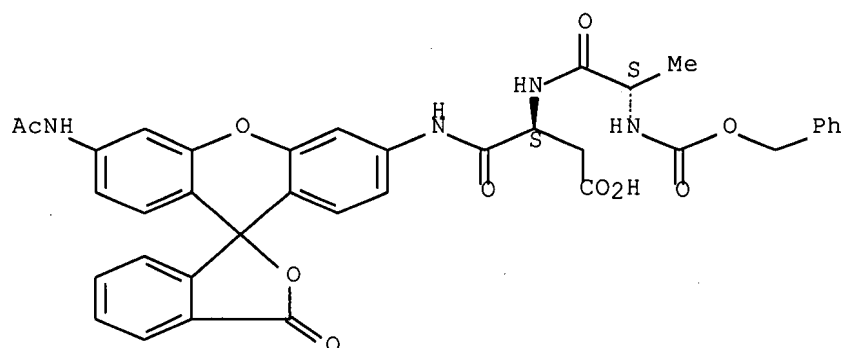


RN 223538-75-8 CAPLUS

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-alanyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)



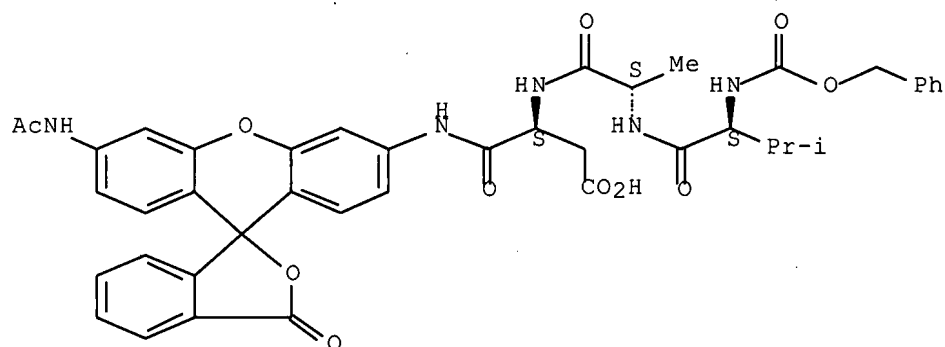
Absolute stereochemistry.



RN 223538-76-9 CAPLUS

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-L-alanyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

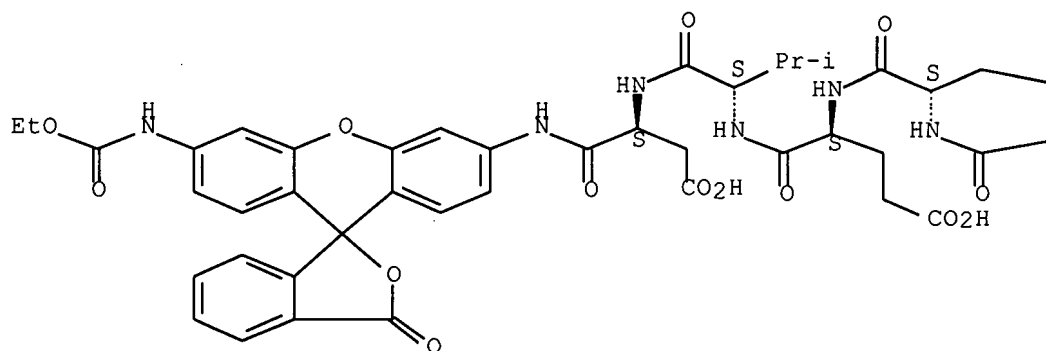


RN 223538-77-0 CAPLUS

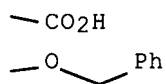
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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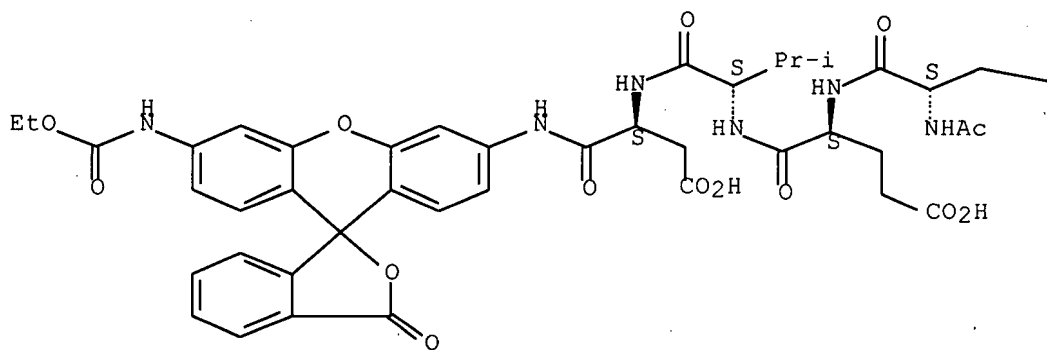


RN 223538-78-1 CAPLUS

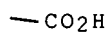
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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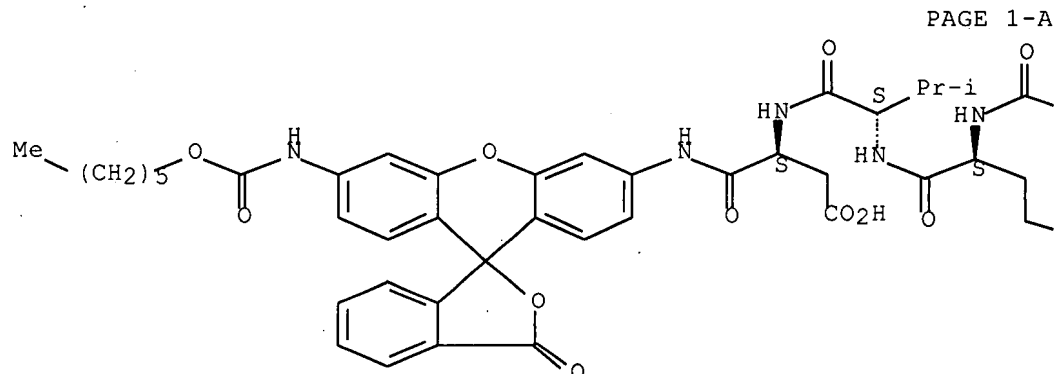
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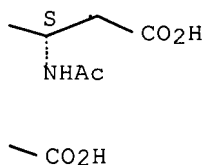
RN 223538-79-2 CAPLUS

CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[(hexyloxy)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



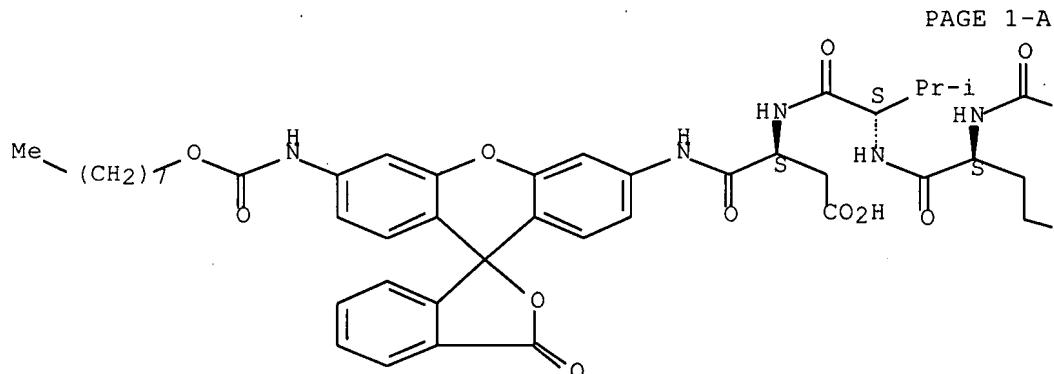
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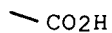
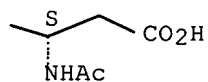
RN 223538-80-5 CAPLUS

CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[ (octyloxy) carbonyl] amino]-3-oxospiro[isobenzofuran-1 (3H), 9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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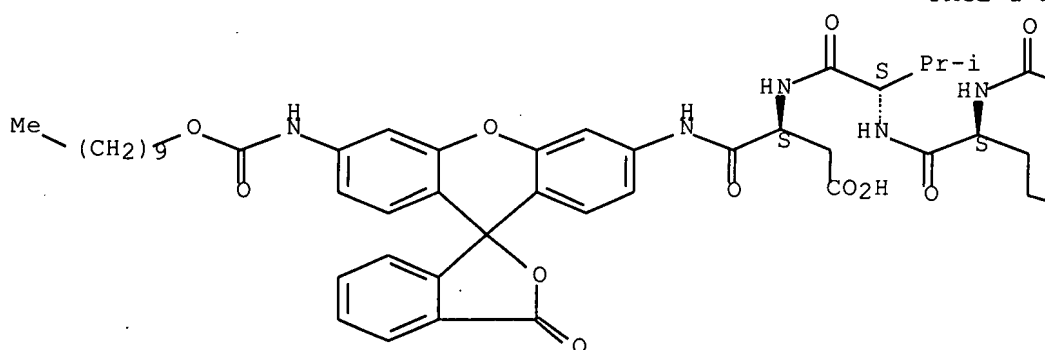


RN 223538-84-9 CAPLUS

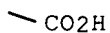
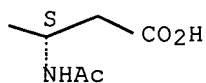
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[ (decyloxy) carbonyl] amino]-3-oxospiro[isobenzofuran-1(3H), 9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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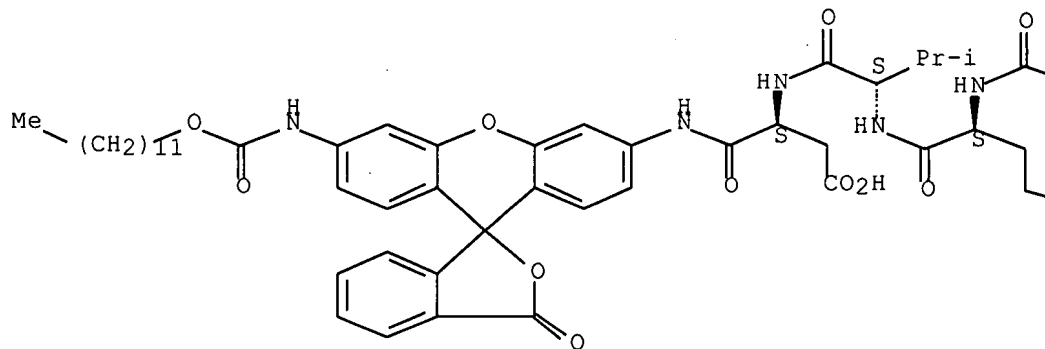


RN 223538-86-1 CAPLUS

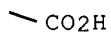
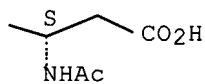
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[ (dodecyloxy) carbonyl] amino]-3-oxospiro[isobenzofuran-1(3H), 9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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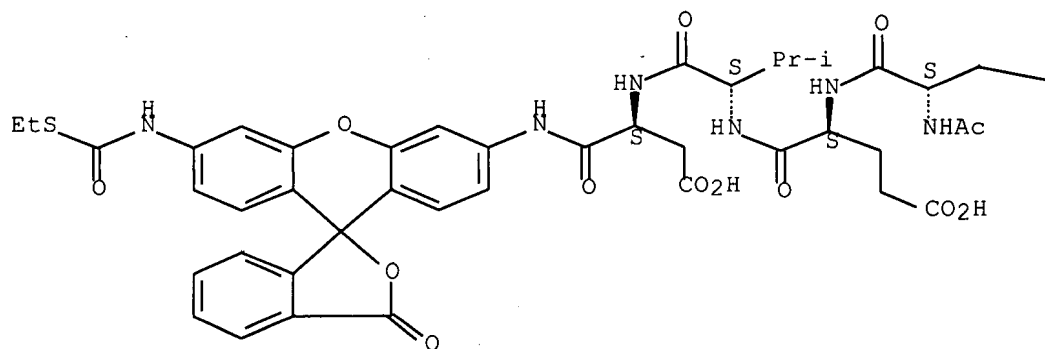


RN 223538-90-7 CAPLUS

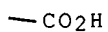
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[ (ethylthio) carbonyl] amino]-3-oxospiro[isobenzofuran-1(3H), 9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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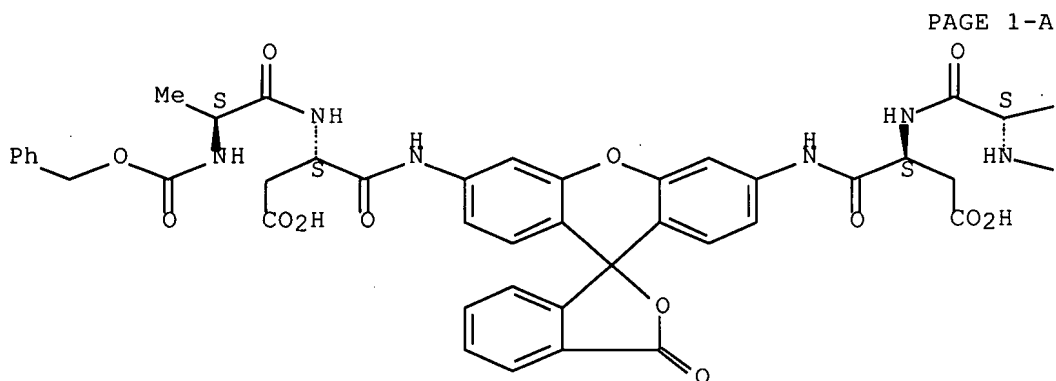
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RL: SPN (Synthetic preparation); PREP (Preparation)  
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including assays for caspases)

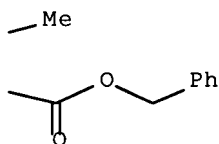
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CN L- $\alpha$ -Asparagine, 2,2'-[(3-oxospiro[isobenzofuran-1(3H),9'-  
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(9CI) (CA INDEX NAME)

Absolute stereochemistry.



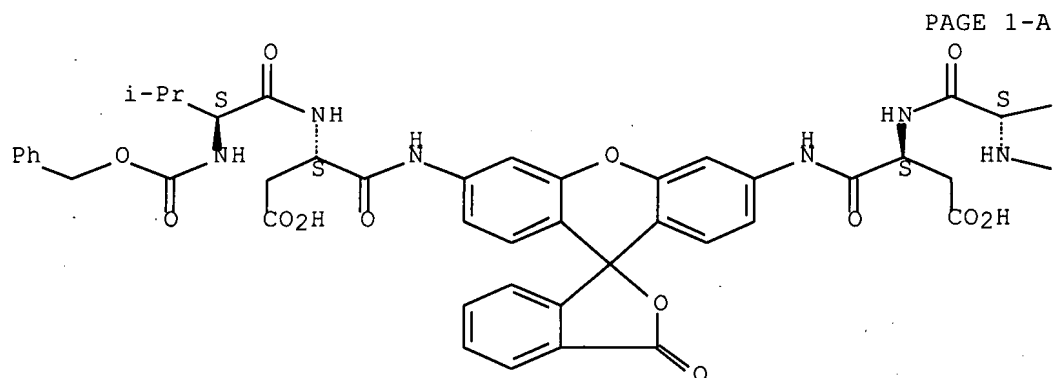
PAGE 1-B



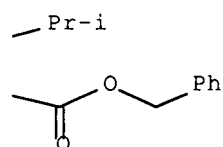
RN 223539-54-6 CAPLUS

CN L- $\alpha$ -Asparagine, 2,2'-[(3-oxospiro[isobenzofuran-1(3H),9'-  
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(9CI) (CA INDEX NAME)

Absolute stereochemistry.



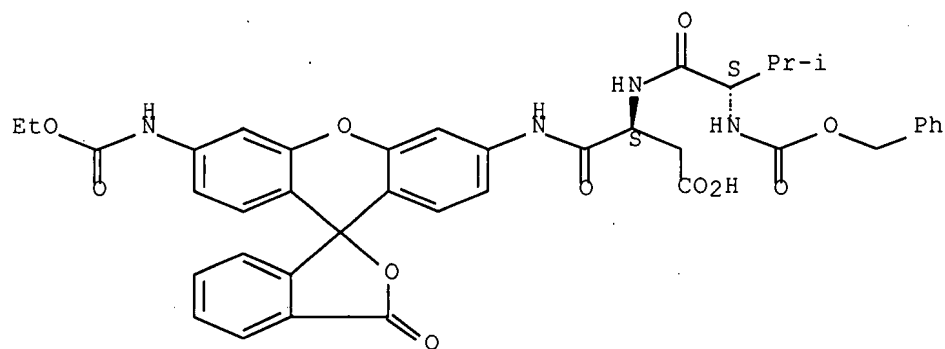
PAGE 1-B



RN 223539-65-9 CAPLUS

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-N-[6'-  
[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-  
yl]- (9CI) (CA INDEX NAME)

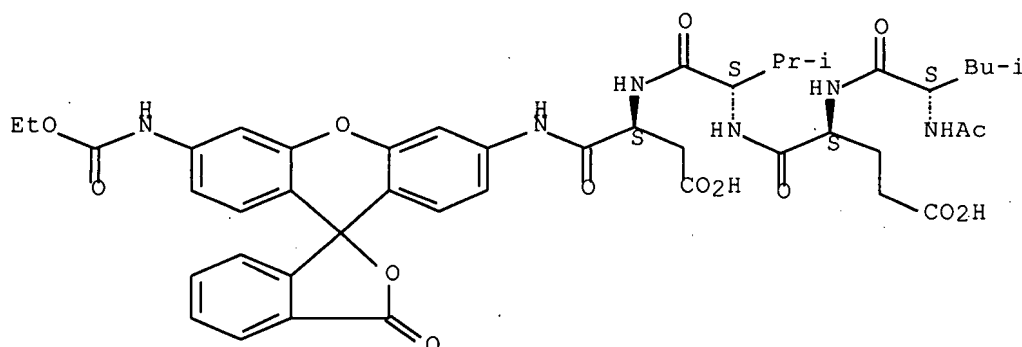
Absolute stereochemistry.



RN 223539-78-4 CAPLUS

CN L- $\alpha$ -Asparagine, N-acetyl-L-leucyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-  
[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-  
yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 11 OF 20 USPATFULL on STN  
 ACCESSION NUMBER: 2005:4920 USPATFULL Full-text  
 TITLE: Methods of treating diseases responsive to induction of Apoptosis and screening assays  
 INVENTOR(S): Kasibhatla, Shailaja, San Diego, CA, UNITED STATES  
 Cai, Sui Xiong, San Diego, CA, UNITED STATES  
 Tseng, Ben, San Diego, CA, UNITED STATES  
 Jessen, Katayoun Alavi, San Diego, CA, UNITED STATES  
 English, Nicole Marion, San Diego, CA, UNITED STATES  
 Maliartchouk, Serguei, San Diego, CA, UNITED STATES  
 Jiang, Songchun, San Diego, CA, UNITED STATES  
 Sirisoma, Nilantha Sudath, San Diego, CA, UNITED STATES  
 Zhang, Han-Zhong, San Diego, CA, UNITED STATES  
 STATES  
 Kuemmerle, Jared, Del Mar, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005004026	A1	20050106
APPLICATION INFO.:	US 2004-826909	A1	20040419 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-463649P	20030418 (60)
	US 2003-463662P	20030418 (60)
	US 2003-484749P	20030707 (60)
	US 2003-484750P	20030707 (60)
	US 2003-532665P	20031229 (60)

DOCUMENT TYPE: Utility  
 FILE SEGMENT: APPLICATION  
 LEGAL REPRESENTATIVE: STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., WASHINGTON, DC, 20005  
 NUMBER OF CLAIMS: 46  
 EXEMPLARY CLAIM: 1  
 NUMBER OF DRAWINGS: 4 Drawing Page(s)  
 LINE COUNT: 8805  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention pertains to a method of treating, preventing or ameliorating a disease responsive to induction of the caspase cascade in an animal, comprising administering to the animal a compound which binds specifically to one or more Apoptosis Inducing Proteins (AIPs). AIPs include Transferrin Receptor Related Apoptosis Inducing Proteins (TRRAIPs), Clathrin



Heavy Chain Related Apoptosis Inducing Proteins (CHCRAIPs), IQ motif containing GTPase Activating Protein Related Apoptosis Inducing Proteins (IQGAPRAIPs), and Heat Shock Protein Related Apoptosis Inducing Proteins (HSPRAIPs). The present invention also relates to screening methods useful for drug discovery of apoptosis inducing compounds. In particular, the screening methodology relates to using AIPs as a target for the discovery of apoptosis activators useful as anticancer agents. The screening methods of the present invention can employ homogenous or heterogenous binding assays using purified or partially purified AIPs; or whole cell assays using cells with altered levels of one or more AIPs. The invention also contemplates use of gambogic acid or GA-related compounds which bind AIPs and can accordingly be used to raise antibodies useful for drug discovery. Alternatively, labeled GA is used for competitive binding assays for drug discovery. Such assays afford high throughput screening of chemical libraries for apoptosis activators.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L41 ANSWER 12 OF 20 USPATFULL on STN

ACCESSION NUMBER: 2005:4899 USPATFULL Full-text

TITLE: Methods of treating diseases responsive to Induction of Apoptosis

INVENTOR(S): Kasibhatla, Shailaja, San Diego, CA, UNITED STATES

**Cai, Sui Xiong**, San Diego, CA, UNITED STATES

Tseng, Ben, San Diego, CA, UNITED STATES

Jessen, Katayoun Alavi, San Diego, CA, UNITED STATES

Maliartchouk, Serguei, San Diego, CA, UNITED STATES

English, Nicole Marion, San Diego, CA, UNITED STATES

Kuemmerle, Jared, Del Mar, CA, UNITED STATES

Kemnitzer, William E., Irvine, CA, UNITED STATES

**Zhang, Han-Zhong**, San Diego, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005004005	A1	20050106
APPLICATION INFO.:	US 2004-826923	A1	20040419 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-463687P	20030418 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., WASHINGTON, DC, 20005	
NUMBER OF CLAIMS:	32	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	3 Drawing Page(s)	
LINE COUNT:	5231	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention pertains to a method of treating, preventing or ameliorating a disease responsive to induction of the caspase cascade in an animal, comprising administering to the animal a compound which binds specifically to a Tail Interacting Protein Related Apoptosis Inducing Protein (TIPRAIP). The present invention also relates to screening methods useful for drug discovery of apoptosis inducing compounds. In particular, the screening methodology relates to using TIPRAIP as a target for the discovery of apoptosis activators useful as anticancer agents. The screening methods of the present invention can employ homogenous or heterogenous

binding assays using purified or partially purified TIPRAIP; or whole cell assays using cells with altered levels of TIPRAIP. The invention also contemplates use of 3-(4-azidophenyl)-5-(3-chloro-thiophen-2-yl)-[1,2,4]-oxadiazole or a substituted 3-aryl-5-aryl-[1,2,4]-oxadiazole which bind TIPRAIP and can accordingly be used to raise antibodies useful for drug discovery. Alternatively, labeled 3-(4-azidophenyl)-5-(3-chloro-thiophen-2-yl)-[1,2,4]-oxadiazole (or a labeled substituted 3-aryl-5-aryl-[1,2,4]-oxadiazole) is used for competitive binding assays for drug discovery. Such assays afford high throughput screening of chemical libraries for apoptosis activators.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L41 ANSWER 13 OF 20 USPATFULL on STN

ACCESSION NUMBER: 2004:247249 USPATFULL Full-text

TITLE: Novel fluorogenic or fluorescent reporter molecules and their applications for whole-cell fluorescence screening assays for caspases and other enzymes and the use thereof

INVENTOR(S): **Weber, Eckard**, San Diego, CA, UNITED STATES  
**Cai, Sui Xiong**, San Diego, CA, UNITED STATES  
**Keana, John F.W.**, Eugene, OR, UNITED STATES  
**Drewe, John A.**, Costa Mesa, CA, UNITED STATES  
**Zhang, Han-Zhong**, San Diego, CA, UNITED STATES

PATENT ASSIGNEE(S): Cytovia, Inc., San Diego, CA, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004191844	A1	20040930
APPLICATION INFO.:	US 2004-829381	A1	20040422 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2001-947387, filed on 7 Sep 2001, GRANTED, Pat. No. US 6759207 Division of Ser. No. US 1998-168888, filed on 9 Oct 1998, GRANTED, Pat. No. US 6342611		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-145746P	19980303 (60)
	US 1997-61582P	19971010 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., WASHINGTON, DC, 20005	
NUMBER OF CLAIMS:	19	
EXEMPLARY CLAIM:	CLM-01-90	
NUMBER OF DRAWINGS:	12 Drawing Page(s)	
LINE COUNT:	3948	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel fluorescent dyes, novel fluorogenic and fluorescent reporter molecules and new enzyme assay processes that can be used to detect the activity of caspases and other enzymes involved in apoptosis in whole cells, cell lines and tissue samples derived from any living organism or organ. The reporter molecules and assay processes can be used in drug screening procedures to identify compounds which act as inhibitors or inducers of the caspase cascade in whole cells or tissues. The reagents and assays described herein are also useful for determining the chemosensitivity of human cancer cells to treatment with chemotherapeutic

drugs. The present invention also relates to novel fluorogenic and fluorescent reporter molecules and new enzyme assay processes that can be used to detect the activity of type 2 methionine aminopeptidase, dipeptidyl peptidase IV, calpain, aminopeptidase, HIV protease, adenovirus protease, HSV-1 protease, HCMV protease and HCV protease.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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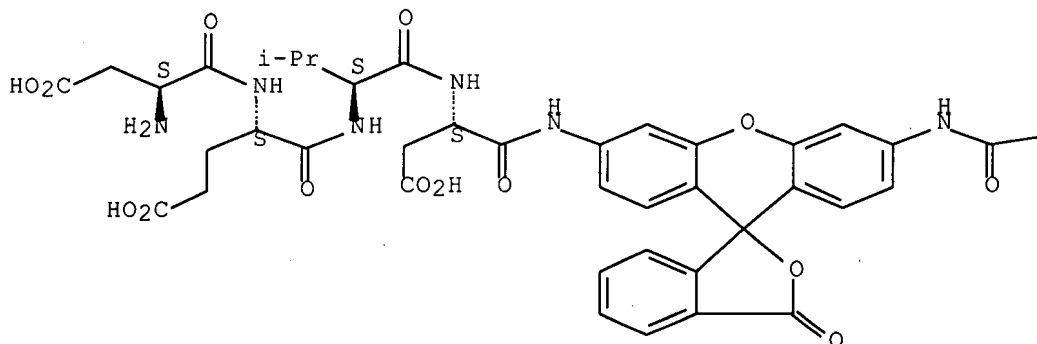
(novel fluorescent reporter mols. and their applications including assays for caspases)

RN 220846-75-3 USPTAFULL

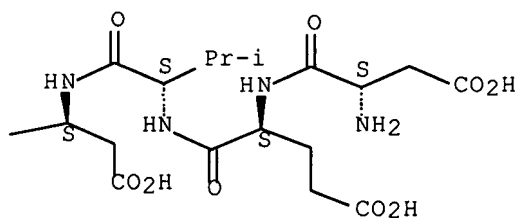
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



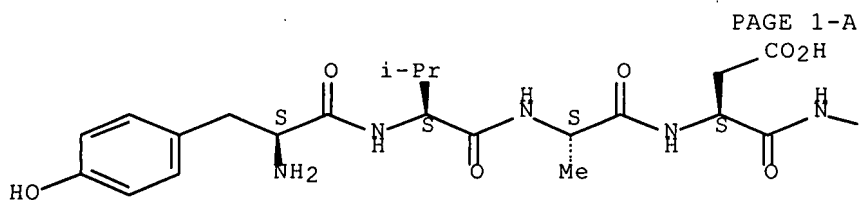
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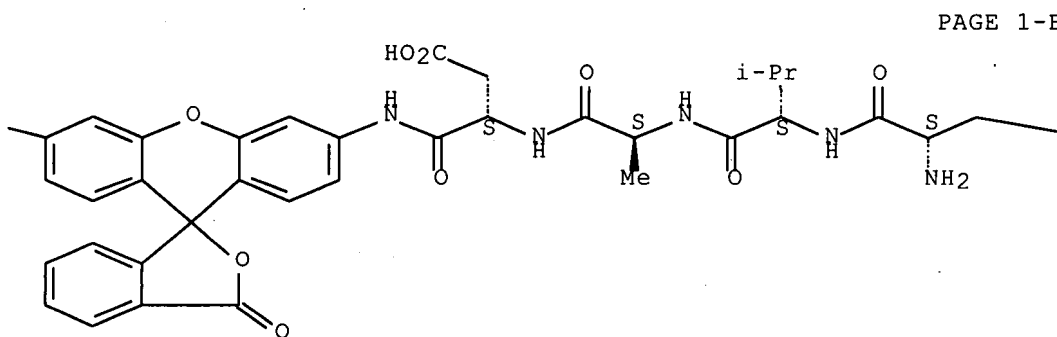
RN 220846-80-0 USPATFULL

CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
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INDEX NAME)

Absolute stereochemistry.

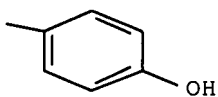


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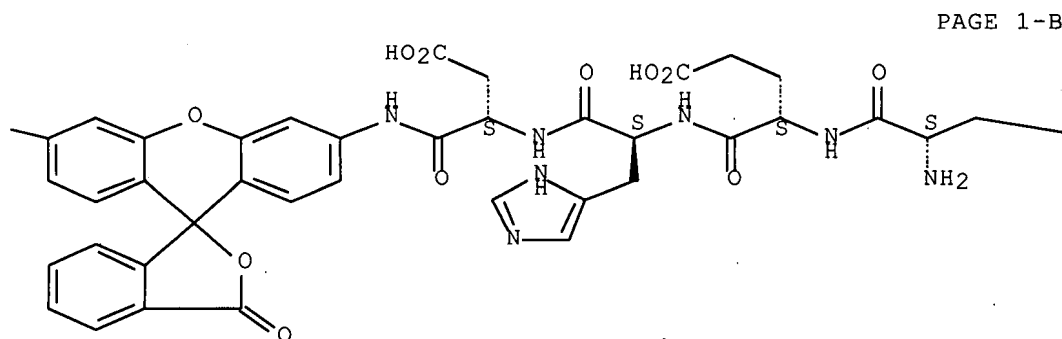
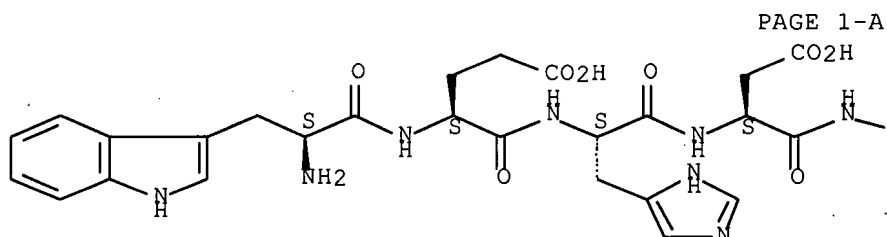
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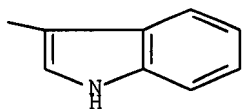
RN 223538-39-4 USPATFULL

CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-tryptophyl-L- $\alpha$ -glutamyl-L-histidyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



PAGE 1-C

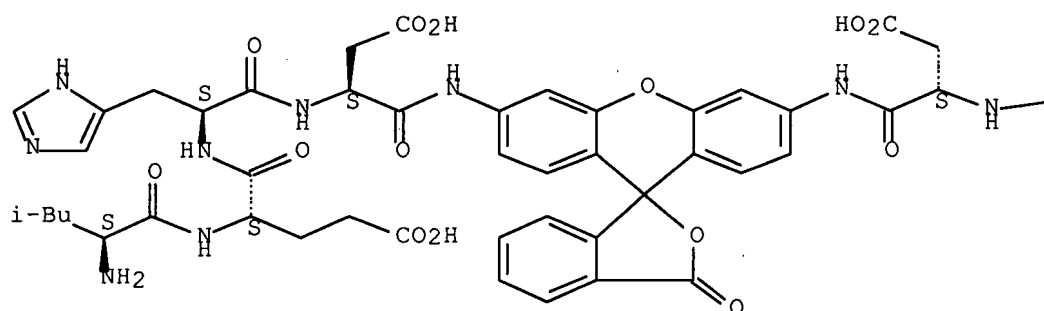


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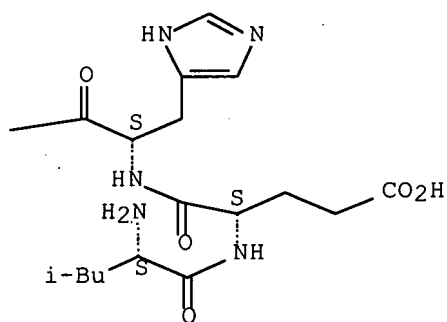
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Absolute stereochemistry.

PAGE 1-A



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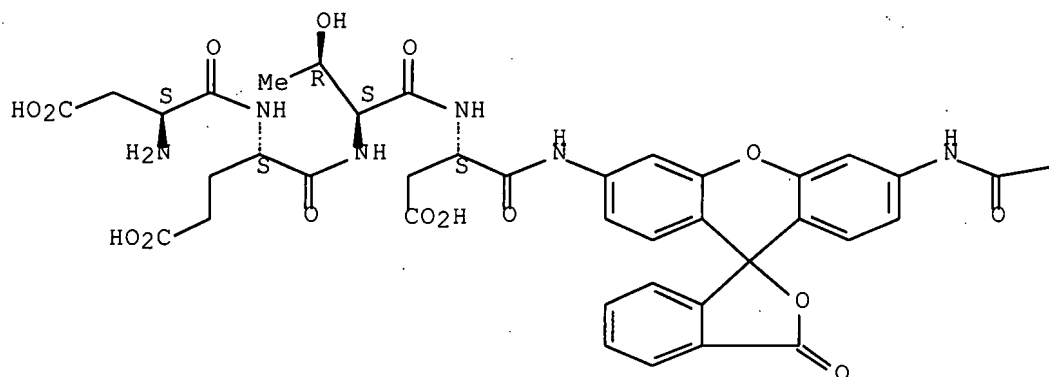


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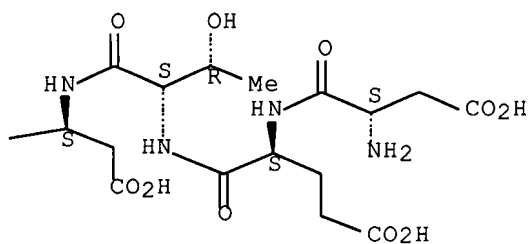
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
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threonyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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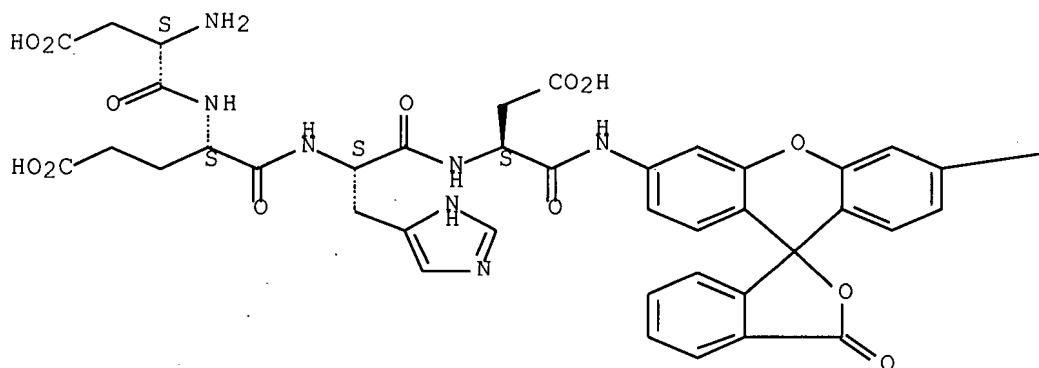


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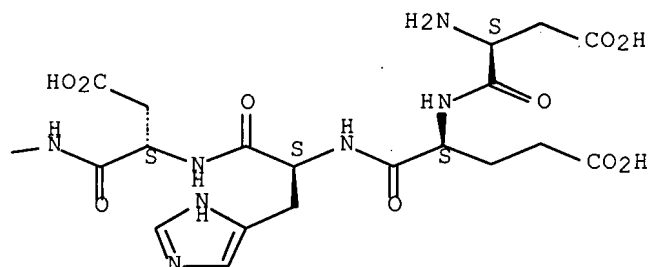
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Absolute stereochemistry.

PAGE 1-A



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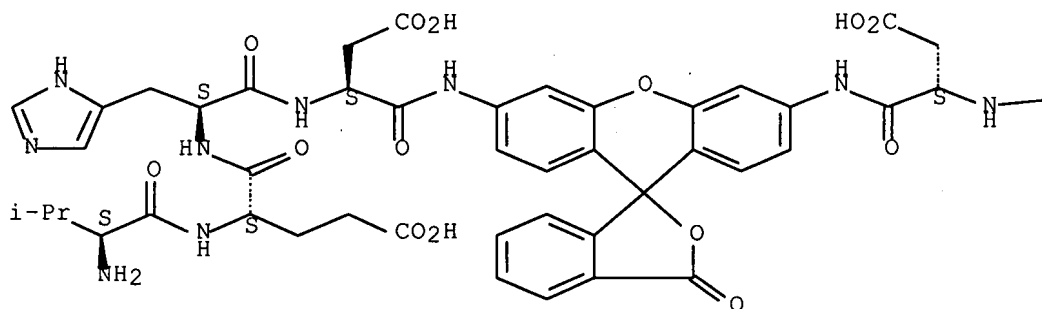
RN 223538-43-0 USPATFULL

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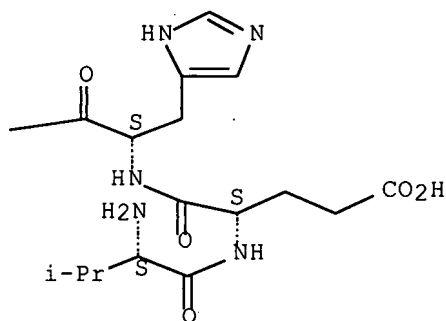
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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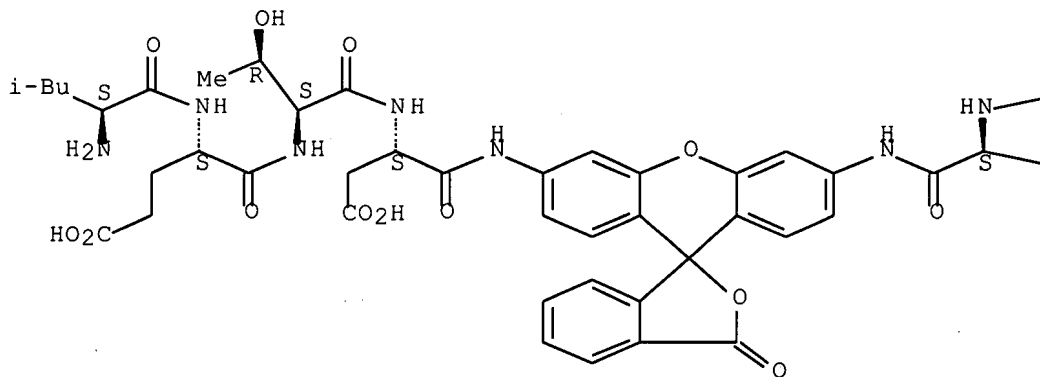
RN 223538-44-1 USPATFULL

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(9CI) (CA INDEX NAME)

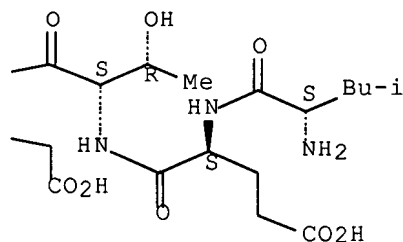
Absolute stereochemistry.



PAGE 1-A



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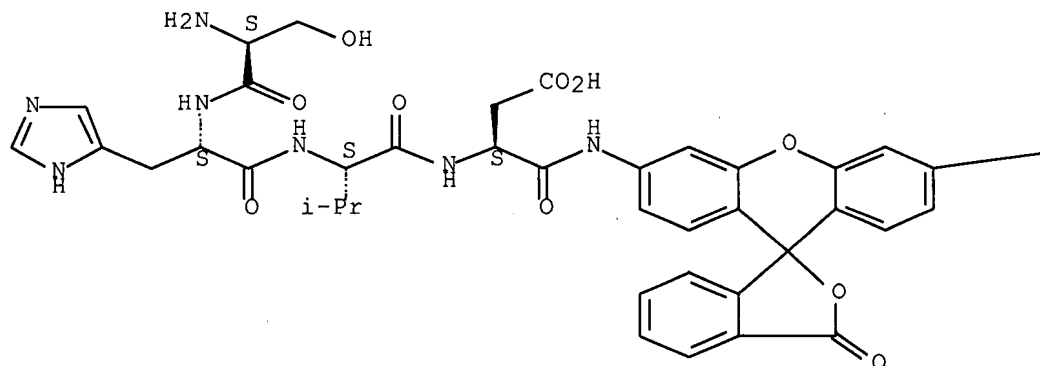


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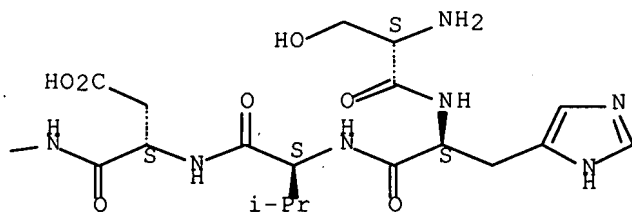
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[9H]xanthene]-3',6'-diyl)bis[L-seryl-L-histidyl-L-valyl- (9CI) (CA  
INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

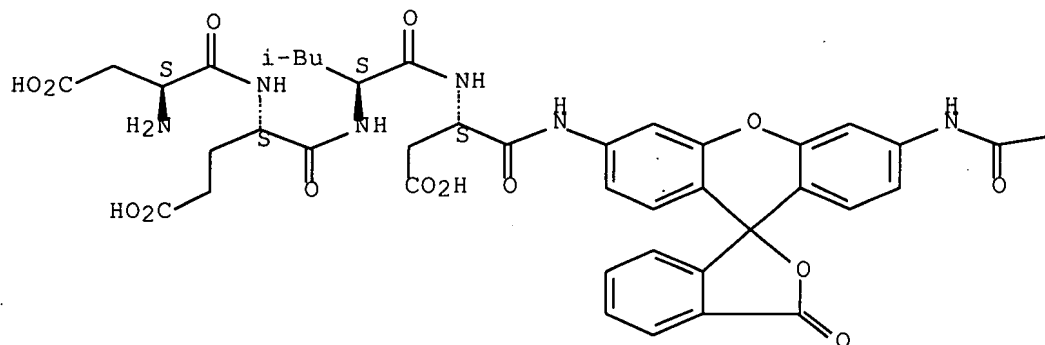


RN 223538-46-3 USPATFULL

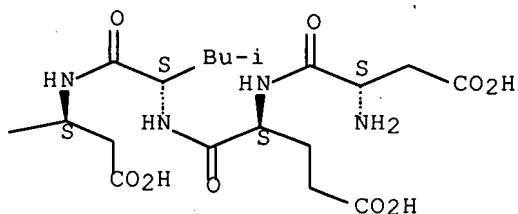
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Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

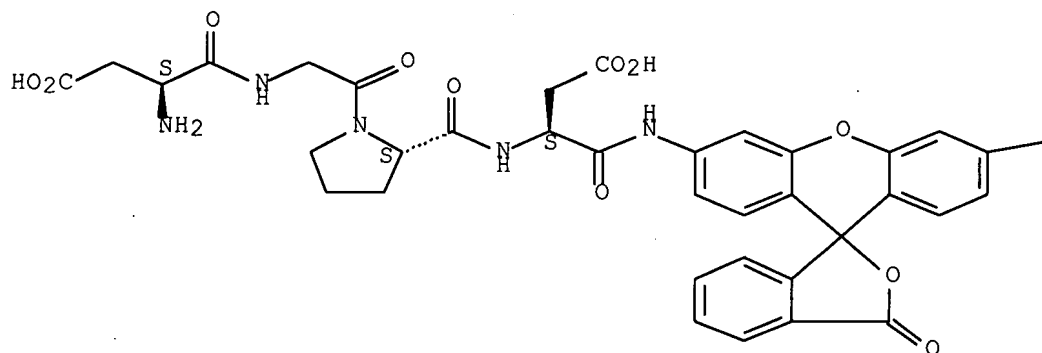


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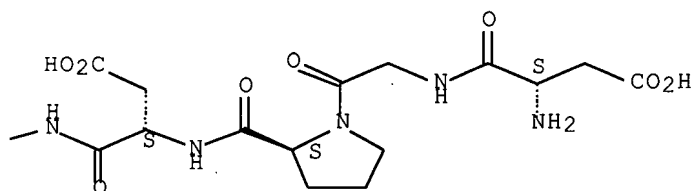
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Absolute stereochemistry.

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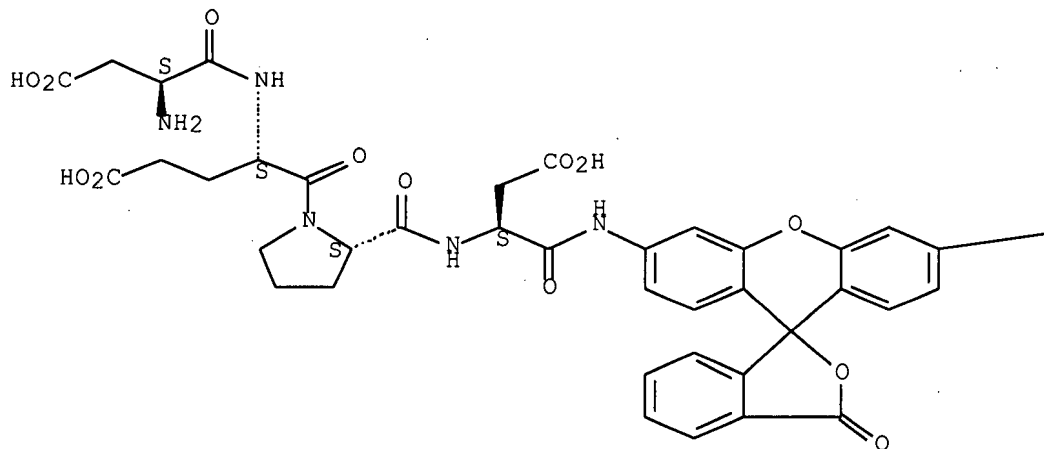


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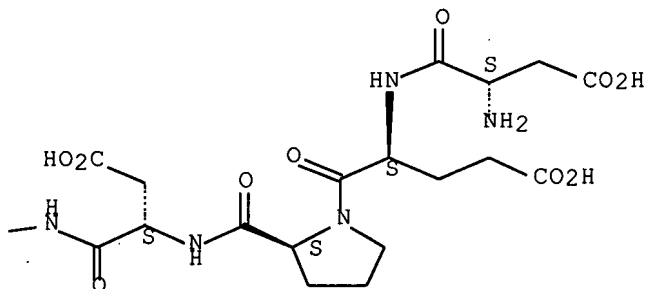
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-prolyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

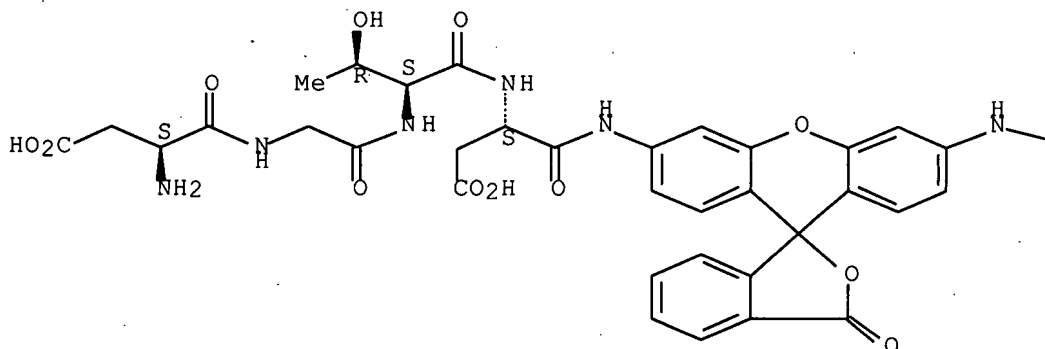


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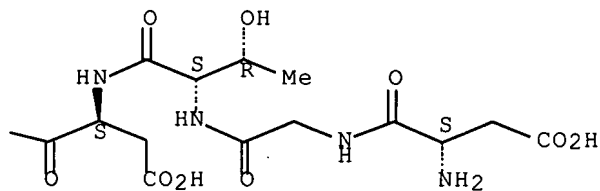
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(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

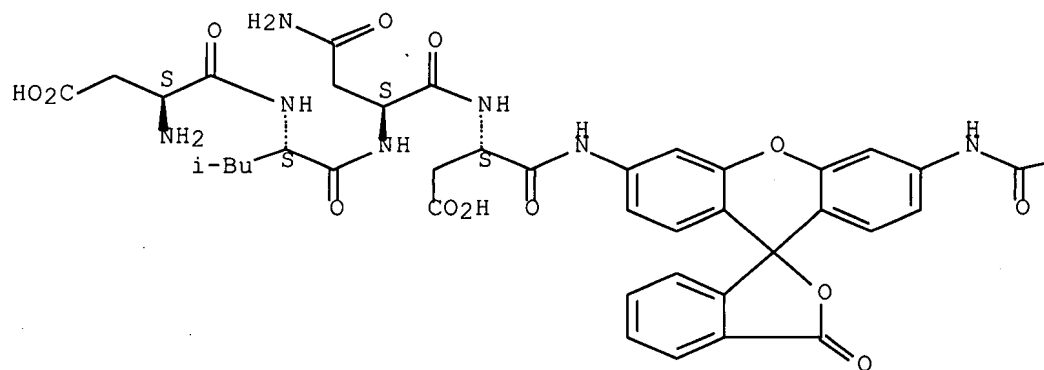


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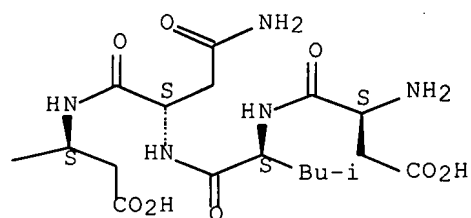
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(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

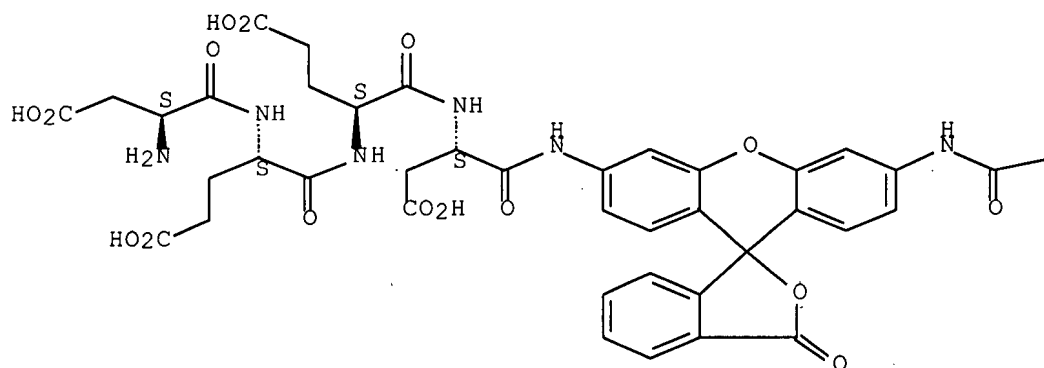


RN 223538-51-0 USPATFULL

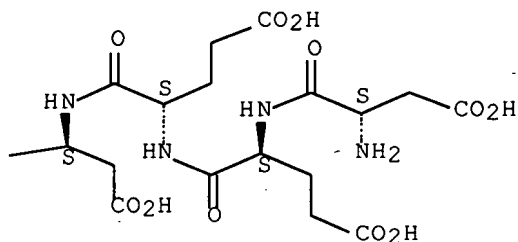
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Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

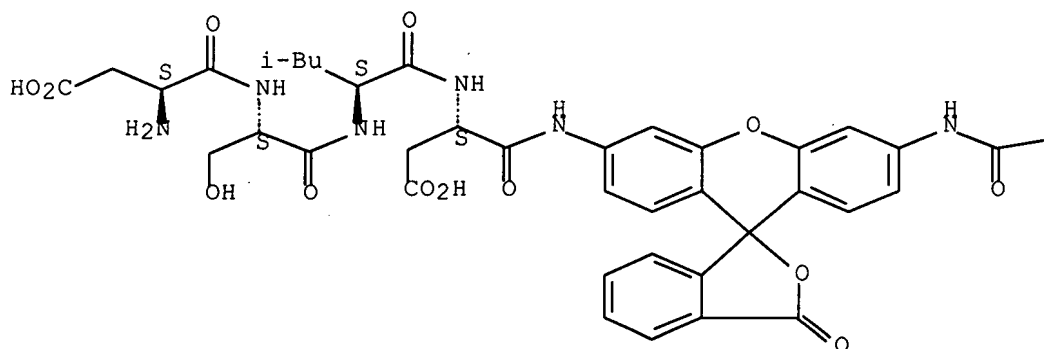


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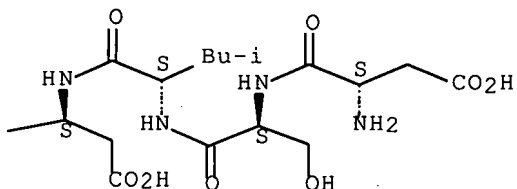
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L-seryl-L-leucyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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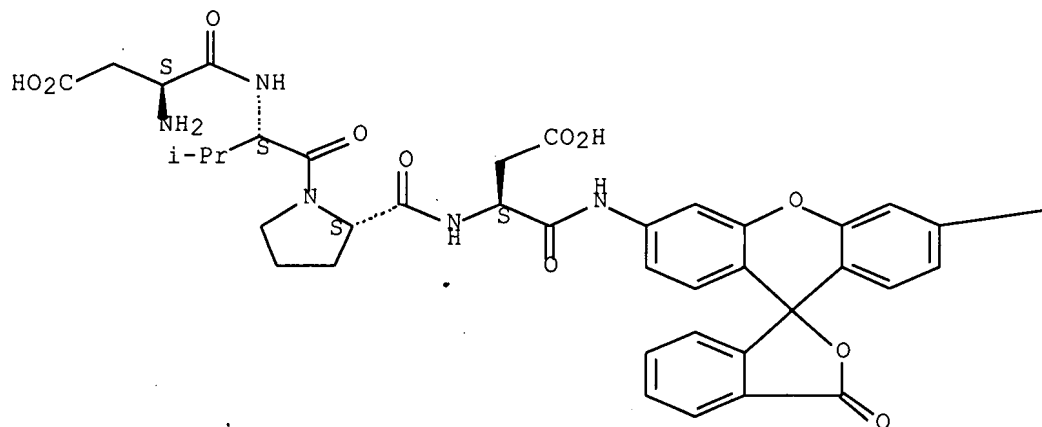


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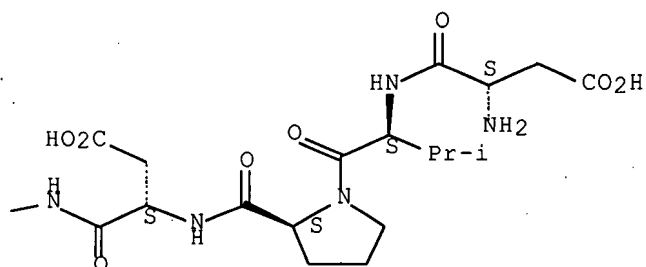
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L-valyl-L-prolyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B

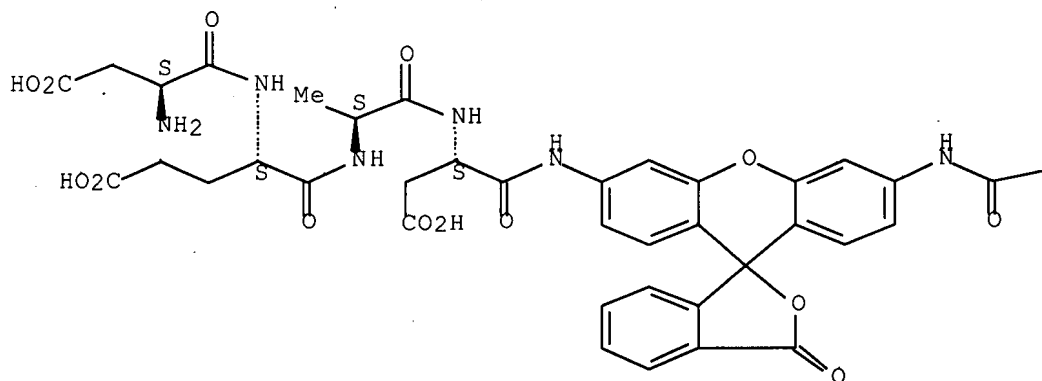


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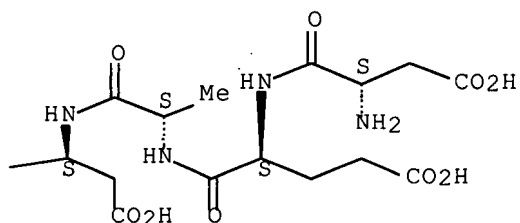
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B

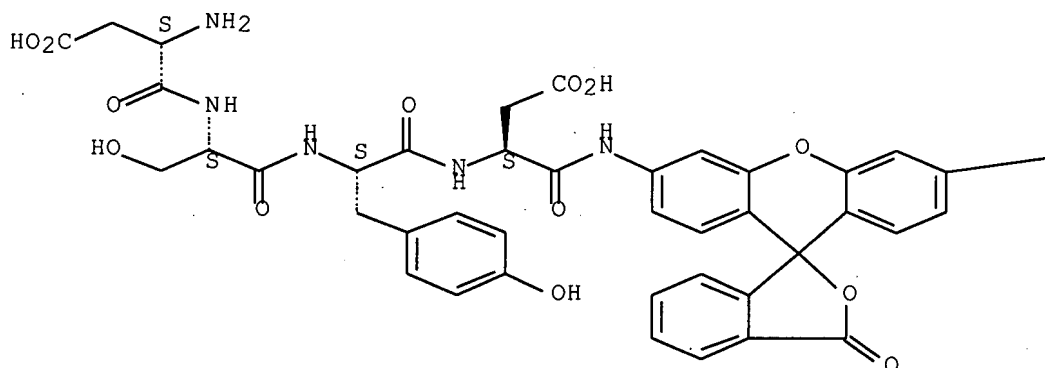


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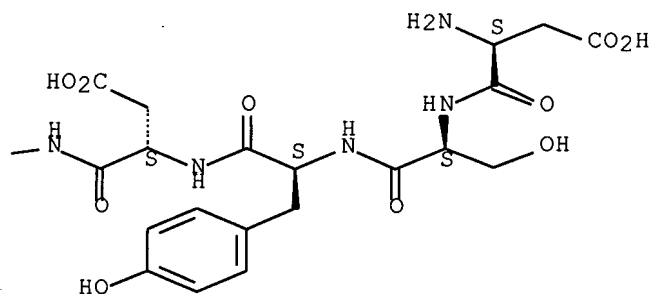
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L-seryl-L-tyrosyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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RN 223538-56-5 USPTFULL

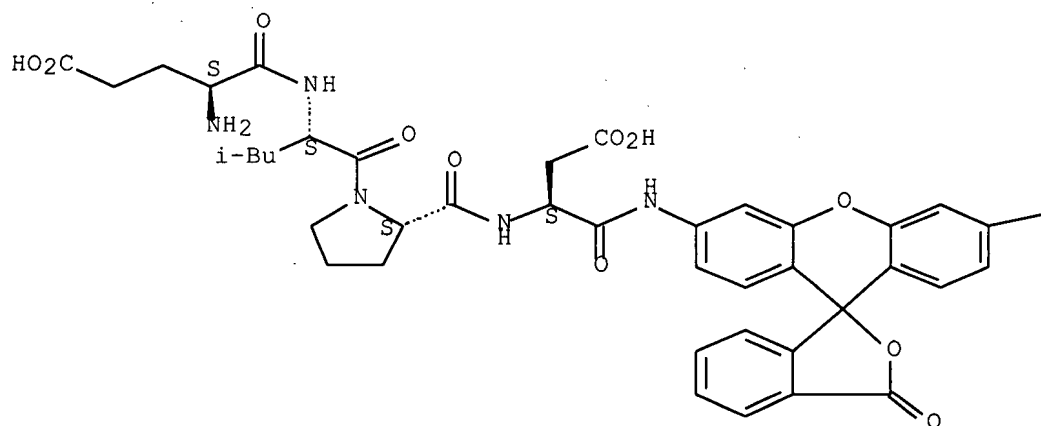
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -glutamyl-L-leucyl-L-prolyl- (9CI)



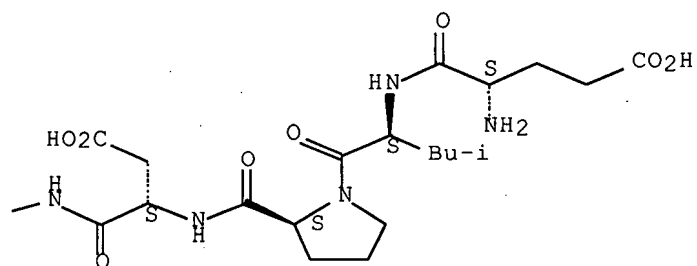
(CA INDEX NAME)

Absolute stereochemistry.

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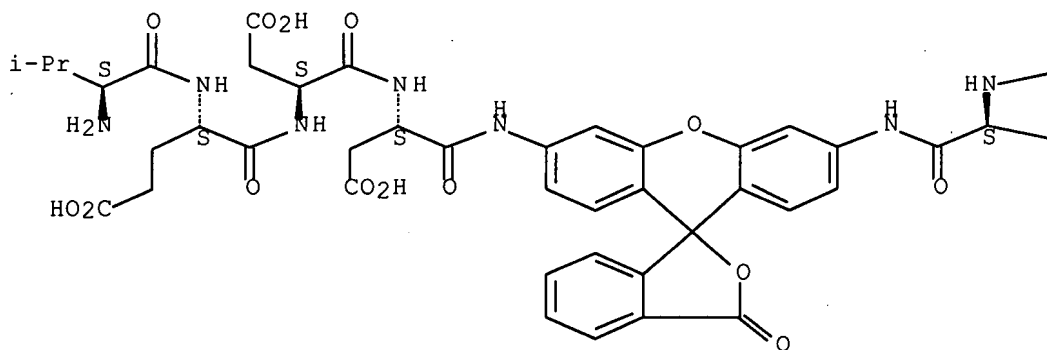


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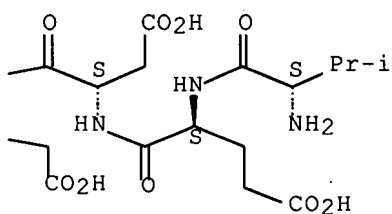
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L-valyl-L- $\alpha$ -glutamyl-L- $\alpha$ -aspartyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B

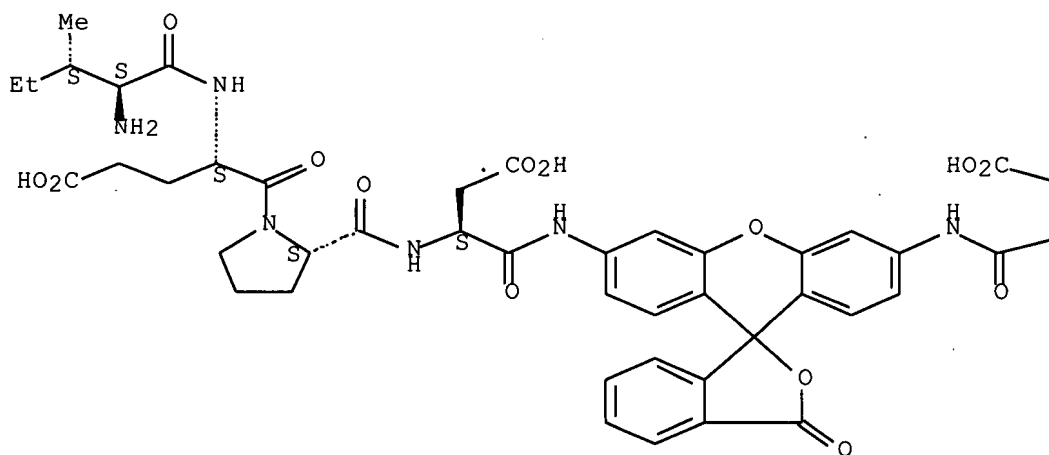


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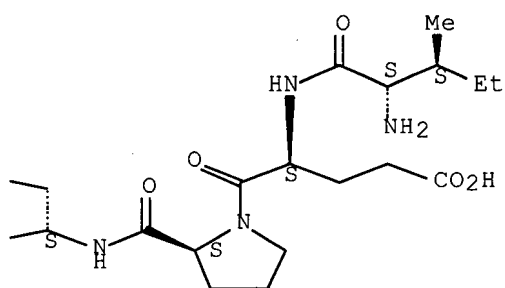
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L-isoleucyl-L-α-glutamyl-L-prolyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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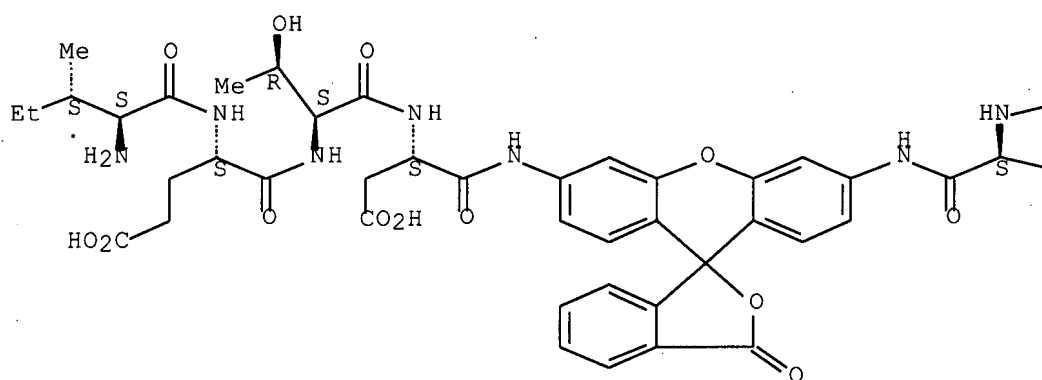


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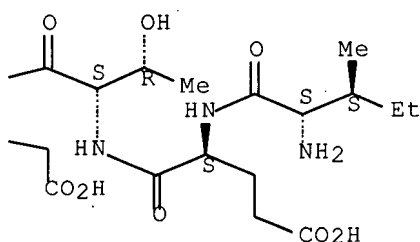
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-isoleucyl-L-α-glutamyl-L-threonyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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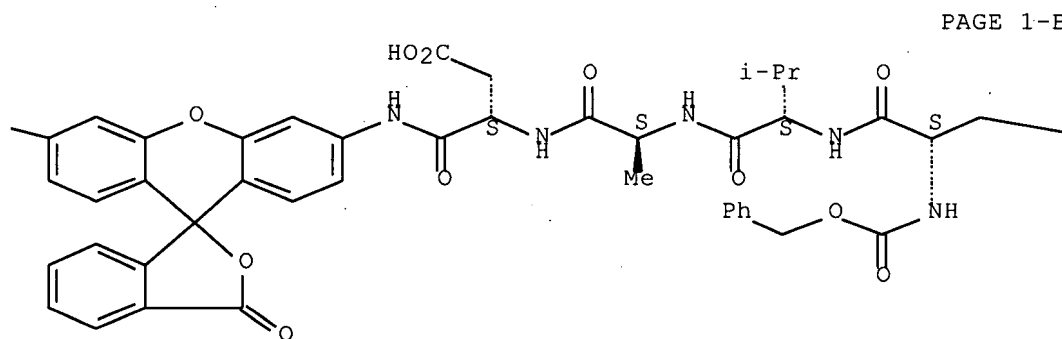
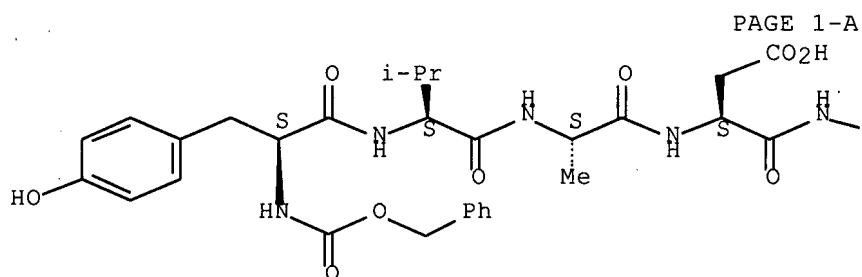
PAGE 1-B



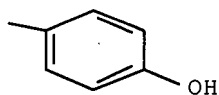
RN 223538-60-1 USPATFULL

CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[N-[(phenylmethoxy)carbonyl]-L-tyrosyl-L-valyl-L-alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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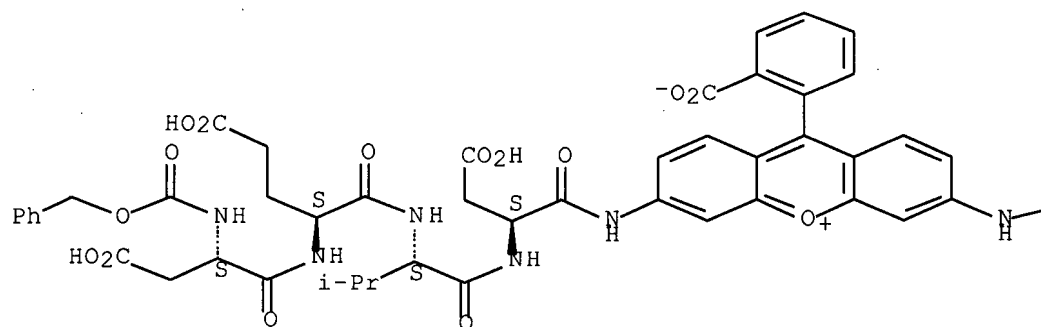


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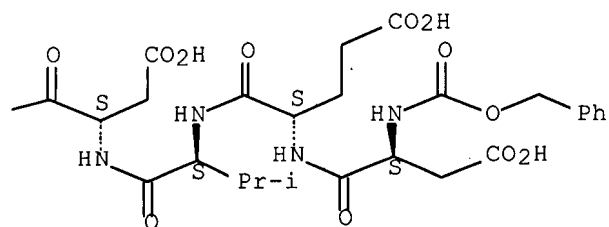
CN L- $\alpha$ -Asparagine, 4,4'-[9-(2-carboxyphenyl)xanthylum-3,6-diyl]bis[N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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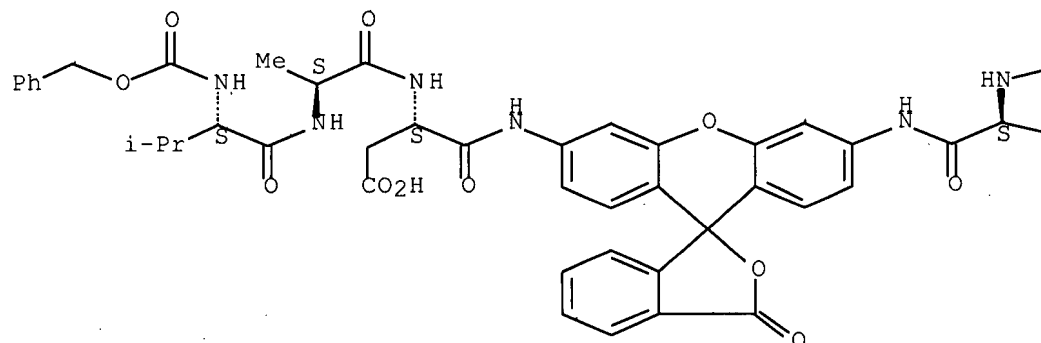


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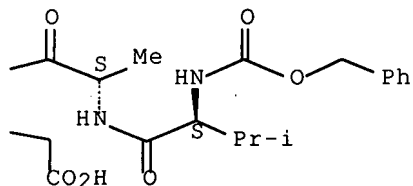
CN L- $\alpha$ -Asparagine, 3,3'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[N-[(phenylmethoxy)carbonyl]-L-valyl-L-  
alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B

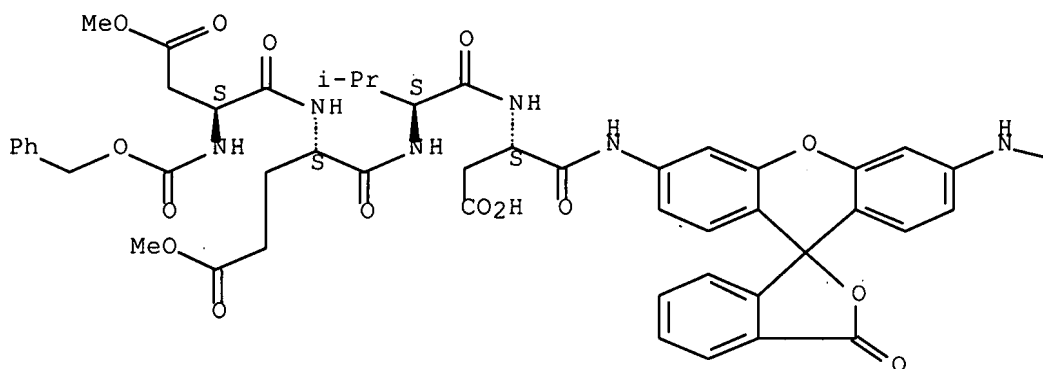


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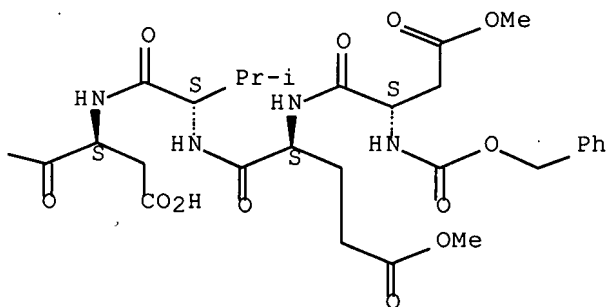
CN L- $\alpha$ -Asparagine, 4,4'- (3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -  
aspartyl-L- $\alpha$ -glutamyl-L-valyl-, 1,1',2,2'-tetramethyl ester (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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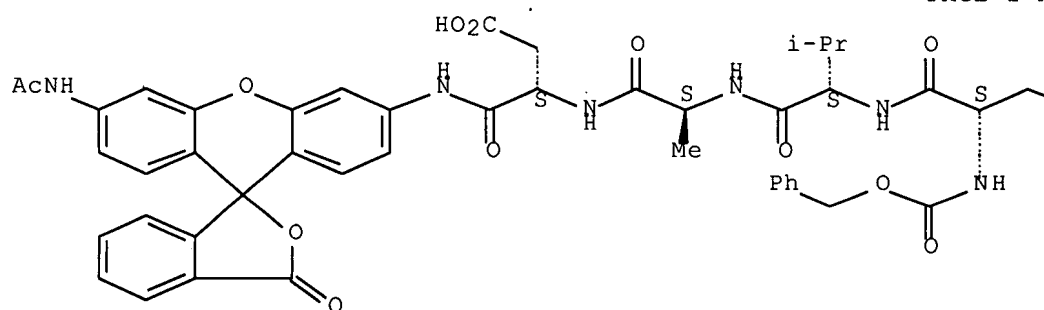


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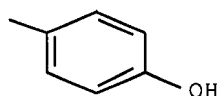
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-tyrosyl-L-valyl-L-  
alanyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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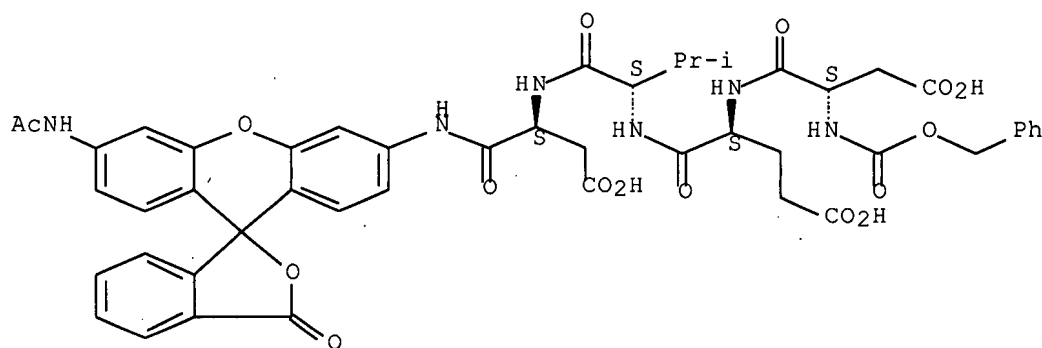
PAGE 1-B



RN 223538-73-6 USPATFULL

CN L-α-Asparagine, N-[(phenylmethoxy)carbonyl]-L-α-aspartyl-L-  
α-glutamyl-L-valyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-  
1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

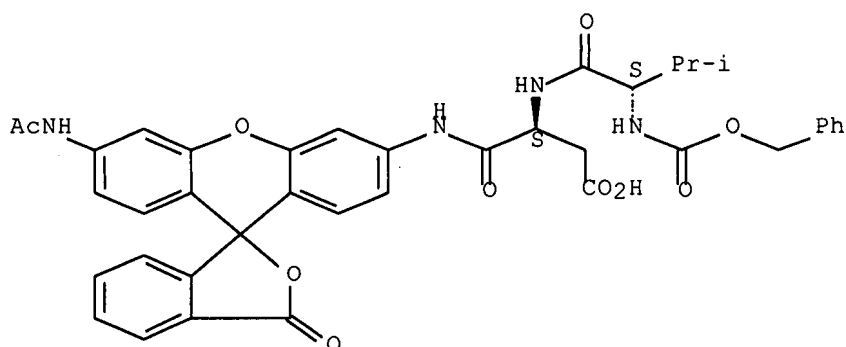
Absolute stereochemistry.



RN 223538-74-7 USPATFULL

CN L-α-Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-N-[6'-  
(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]-  
(9CI) (CA INDEX NAME)

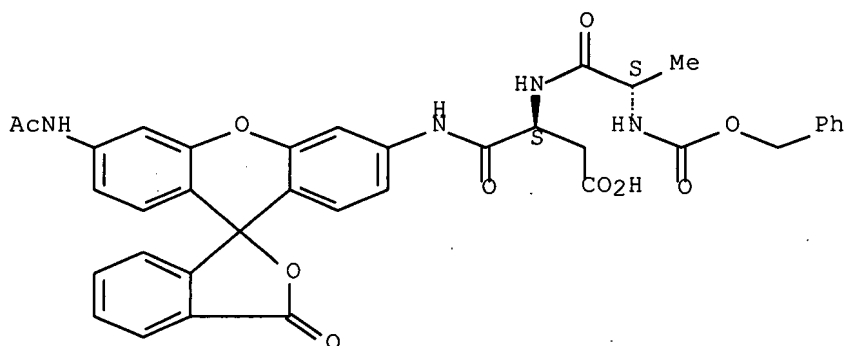
Absolute stereochemistry.



RN 223538-75-8 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-alanyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]-(9CI) (CA INDEX NAME)

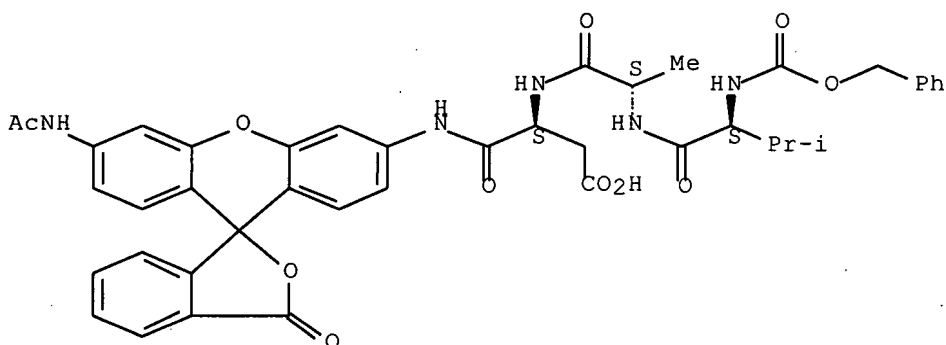
Absolute stereochemistry.



RN 223538-76-9 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-L-alanyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



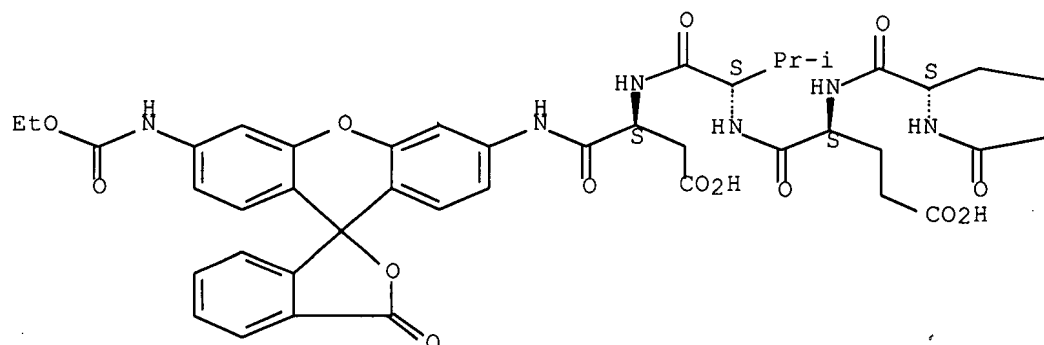
RN 223538-77-0 USPATFULL



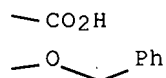
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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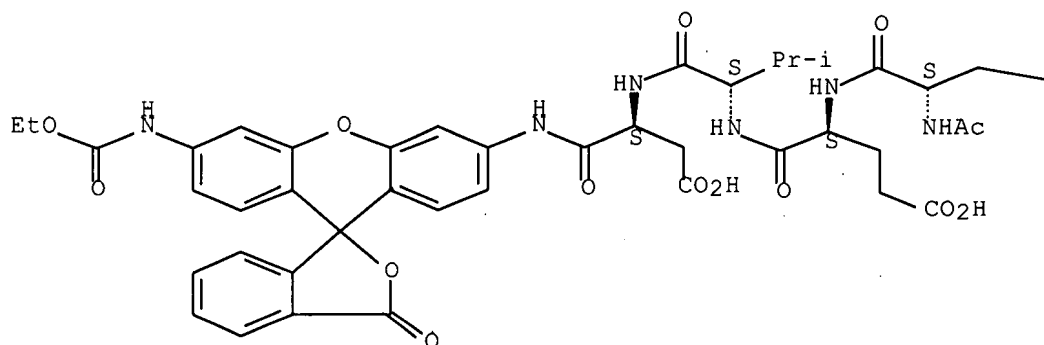


RN 223538-78-1 USPATFULL

CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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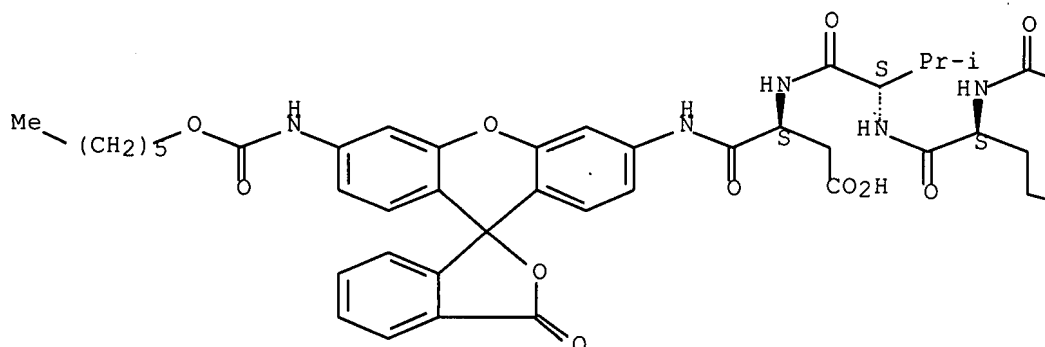
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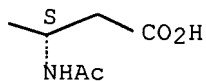
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[ (hexyloxy)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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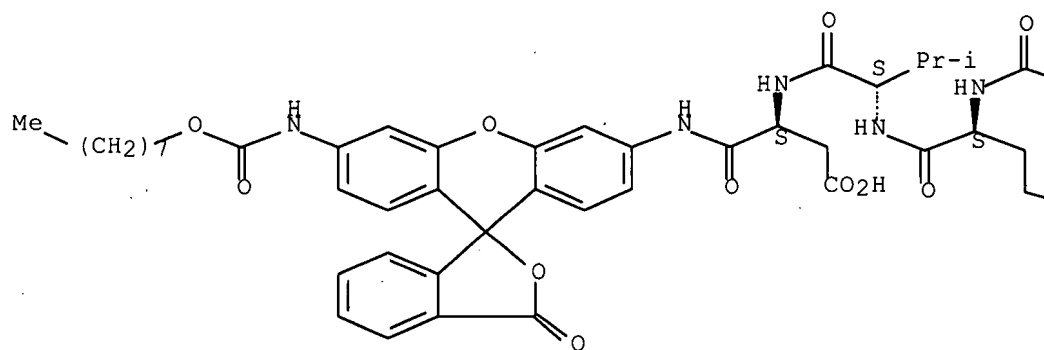
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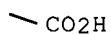
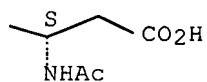
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[ (octyloxy)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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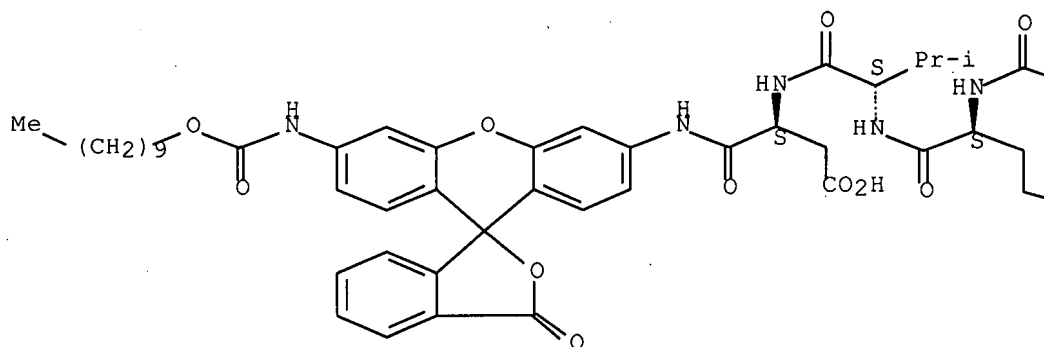


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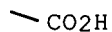
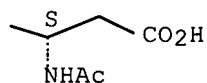
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[ (decyloxy)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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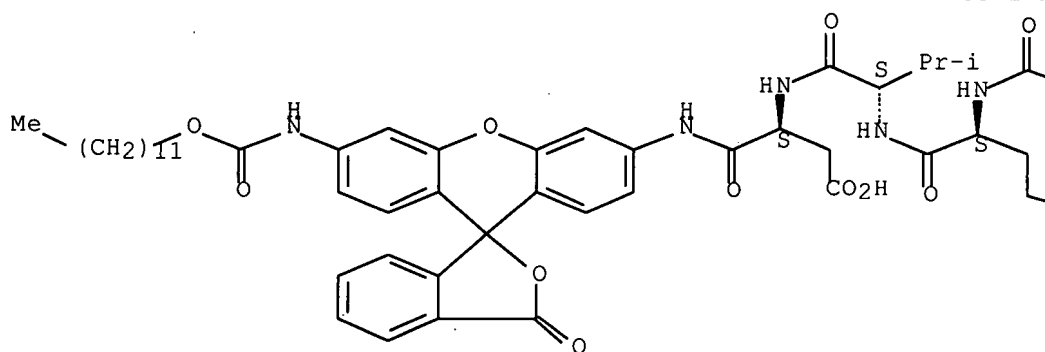


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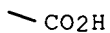
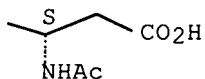
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[[(dodecyloxy)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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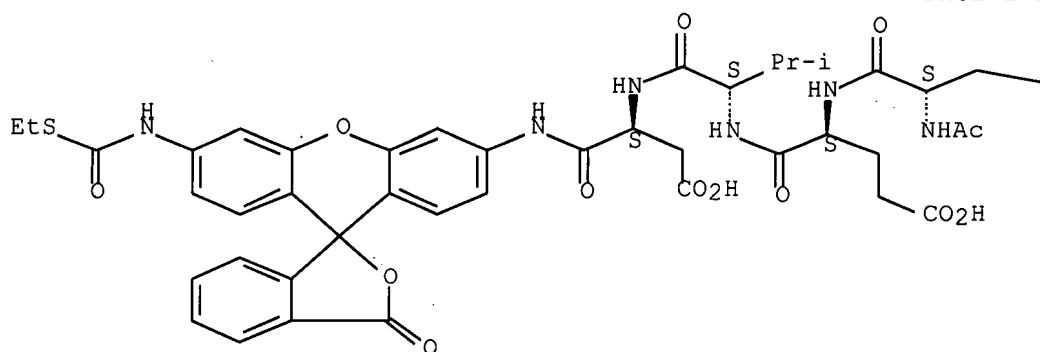


RN 223538-90-7 USPATFULL

CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[[(ethylthio)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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-CO<sub>2</sub>H

IT 223539-51-3P 223539-54-6P 223539-65-9P  
223539-78-4P

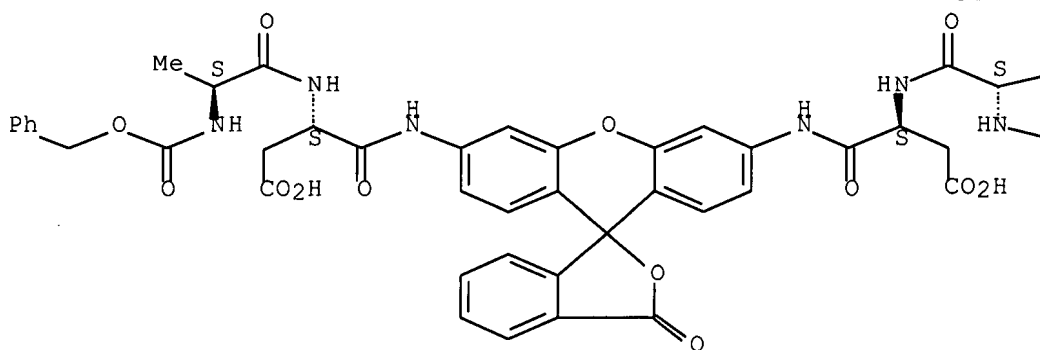
(novel **fluorescent** reporter mols. and their applications  
including assays for caspases)

RN 223539-51-3 USPATFULL

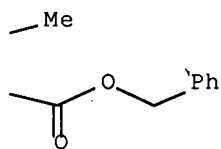
CN L- $\alpha$ -Asparagine, 2,2'-[(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene]-3',6'-diyl)diimino]bis[N-[(phenylmethoxy)carbonyl]-L-alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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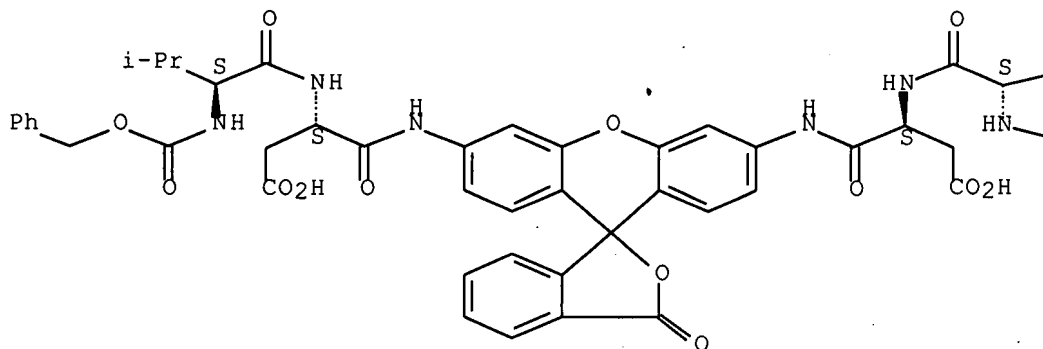


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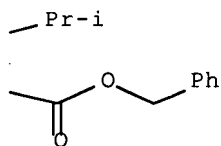
CN L- $\alpha$ -Asparagine, 2,2'-[(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)diimino]bis[N-[(phenylmethoxy)carbonyl]-L-valyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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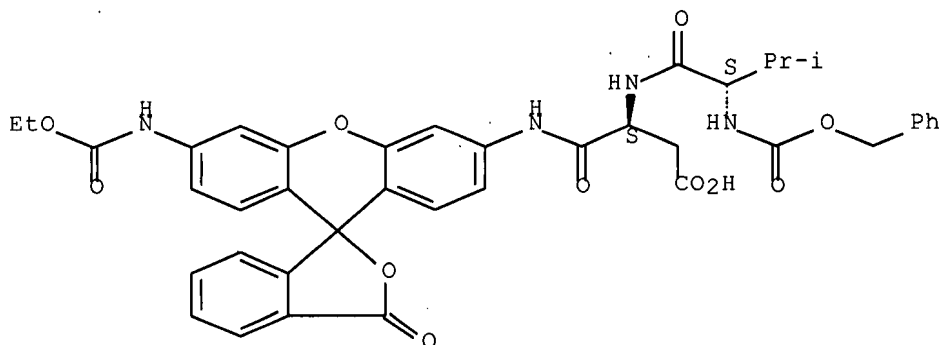
PAGE 1-B



RN 223539-65-9 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3'-yl]- (9CI) (CA INDEX NAME)

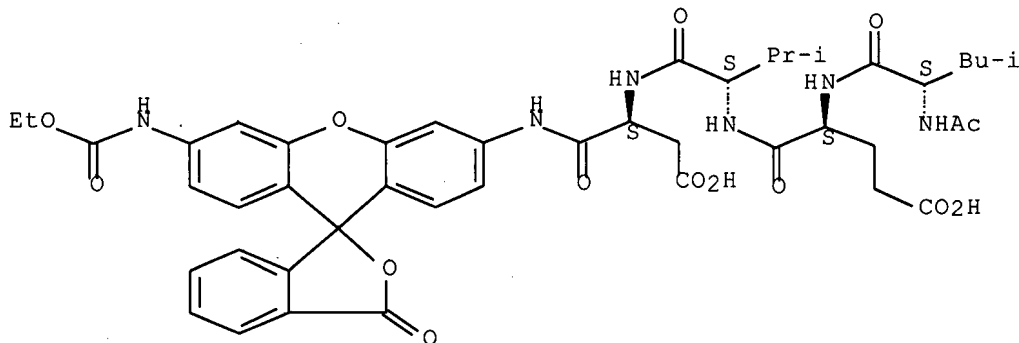
Absolute stereochemistry.



RN 223539-78-4 USPATFULL

CN L-α-Asparagine, N-acetyl-L-leucyl-L-α-glutamyl-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H), 9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L41 ANSWER 14 OF 20 USPATFULL on STN

ACCESSION NUMBER: 2003:295019 USPATFULL Full-text

TITLE: Novel fluorescence dyes and their applications for whole-cell fluorescence screening assays for caspases, peptidases, proteases and other enzymes and the use thereof

INVENTOR(S): **Zhang, Han-Zhong**, San Diego, CA, UNITED STATES

**Cai, Sui Xiong**, San Diego, CA, UNITED STATES

**Drewe, John A.**, Carlsbad, CA, UNITED STATES

**Yang, Wu**, Irvine, CA, UNITED STATES

PATENT ASSIGNEE(S): Cytovia, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003208037	A1	20031106
	US 6984718	B2	20060110
APPLICATION INFO.:	US 2002-138375	A1	20020506 (10)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 2000-583225, filed on 30 May 2000, ABANDONED Division of Ser. No. US 1999-357952, filed on 21 Jul 1999, GRANTED, Pat. No. US 6248904		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-93642P	19980721 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., WASHINGTON, DC, 20005	
NUMBER OF CLAIMS:	73	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	9 Drawing Page(s)	
LINE COUNT:	3991	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

AB The present invention relates to novel fluorescent dyes, novel fluorogenic and fluorescent reporter molecules and new enzyme assay processes that can be used to detect the activity of caspases and other enzymes involved in apoptosis in whole cells, cell lines and tissue samples derived from any living organism or organ. The reporter molecules and assay processes can be used in drug screening procedures to identify compounds which act as inhibitors or inducers of the caspase cascade in whole cells or tissues. The reagents and assays described herein are also useful for determining the chemosensitivity of human cancer cells to treatment with chemotherapeutic drugs. The present invention also relates to novel fluorogenic and fluorescent reporter molecules and new enzyme assay processes that can be used to detect the activity of type 2 methionine aminopeptidase, HIV protease, adenovirus protease, HSV-1 protease, HCMV protease and HCV protease.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

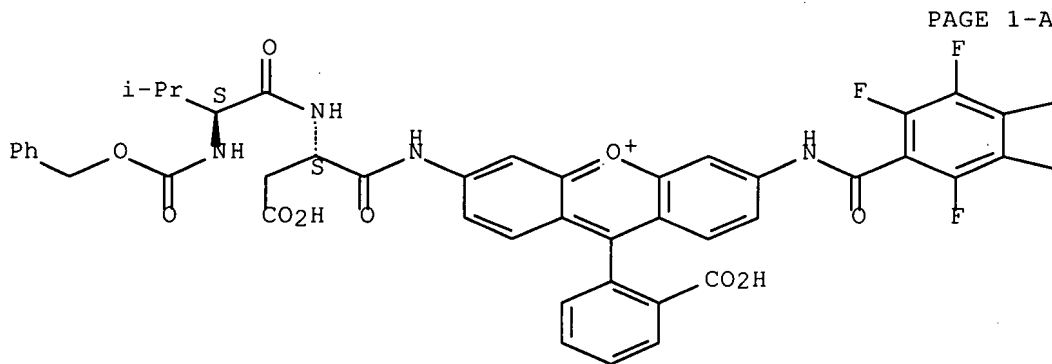
IT 256527-30-7P

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(fluorescence dyes and their applications for whole cell
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RN 256527-30-7 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.





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IT 256527-07-8P 256527-09-0P 256527-11-4P  
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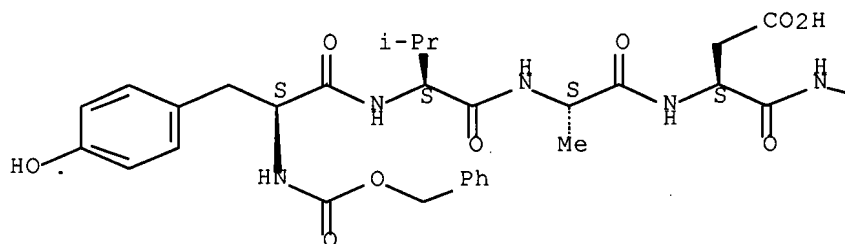
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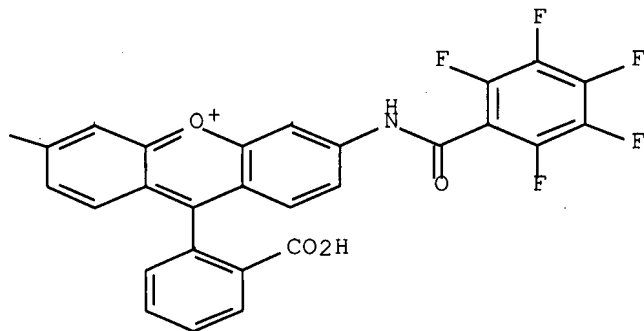
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Absolute stereochemistry.

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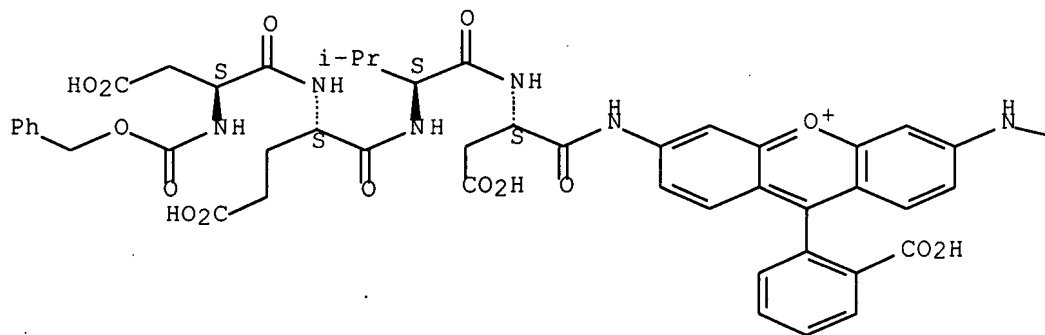


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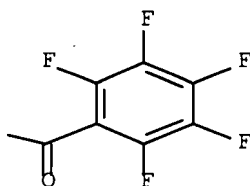
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Absolute stereochemistry.

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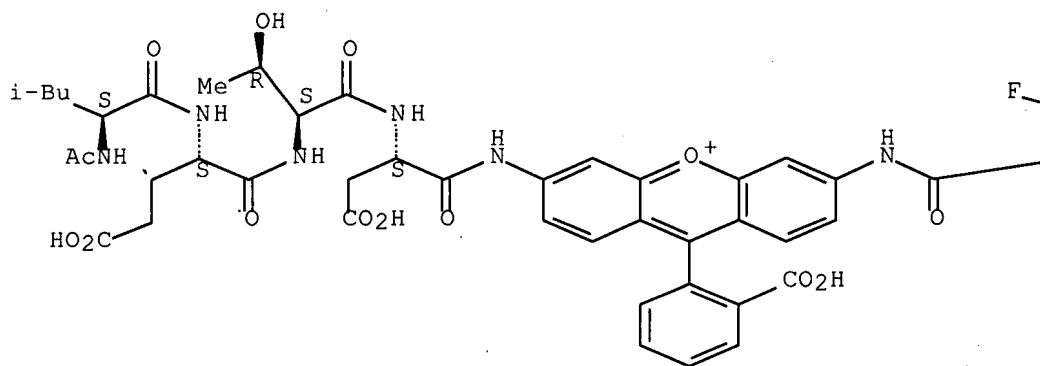


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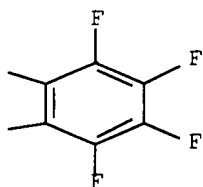
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Absolute stereochemistry.

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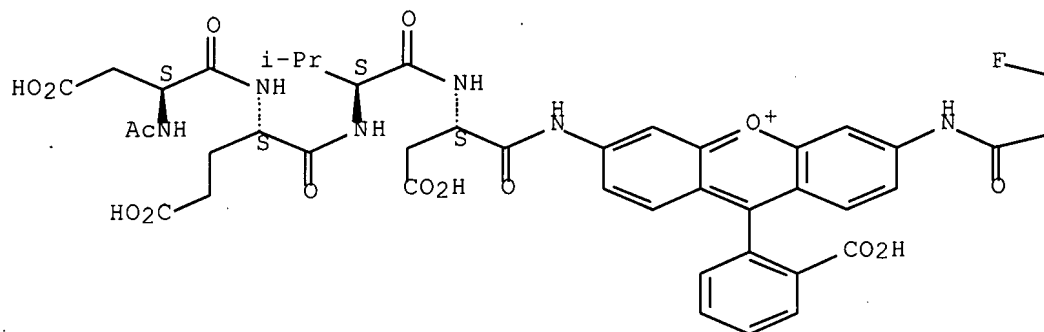


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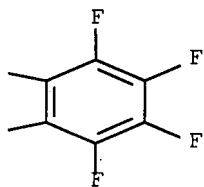
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Absolute stereochemistry.

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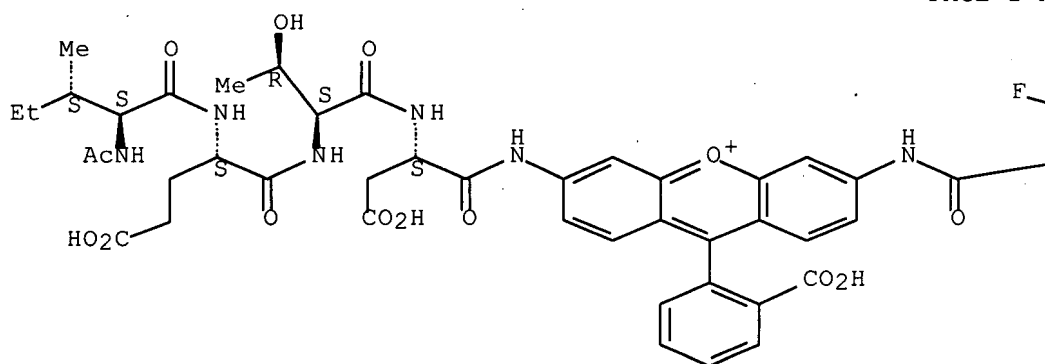


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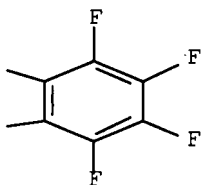
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(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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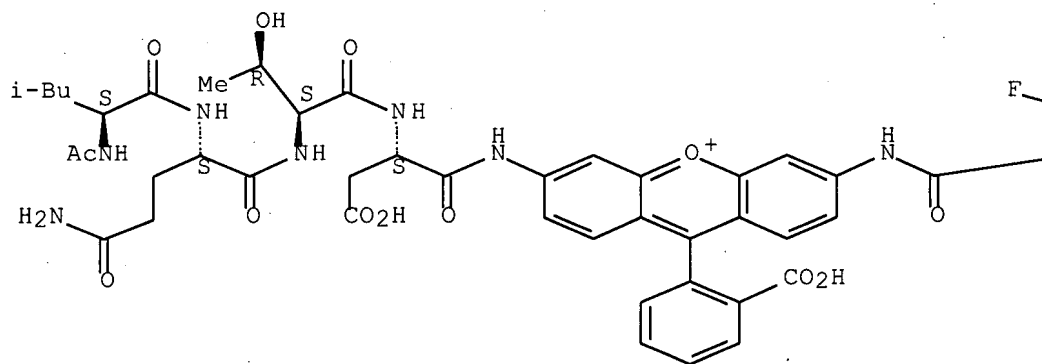


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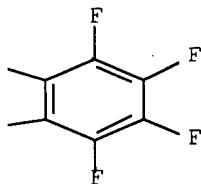
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Absolute stereochemistry.

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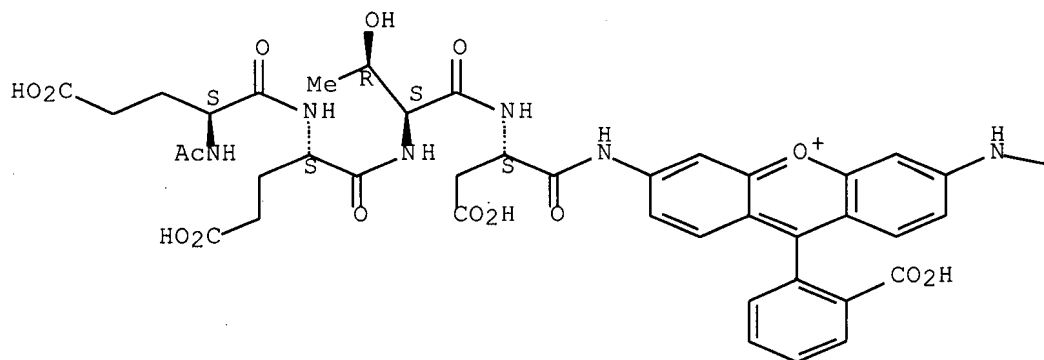


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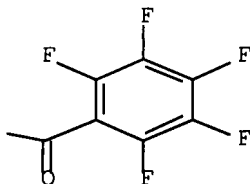
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Absolute stereochemistry.

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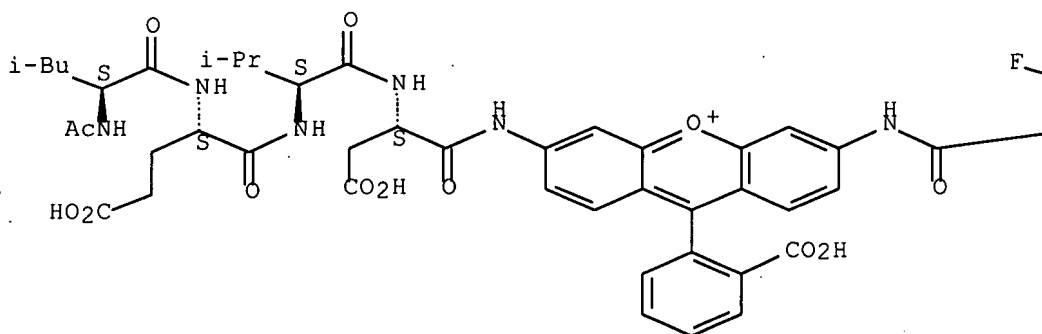


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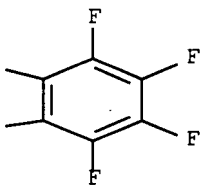
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Absolute stereochemistry.

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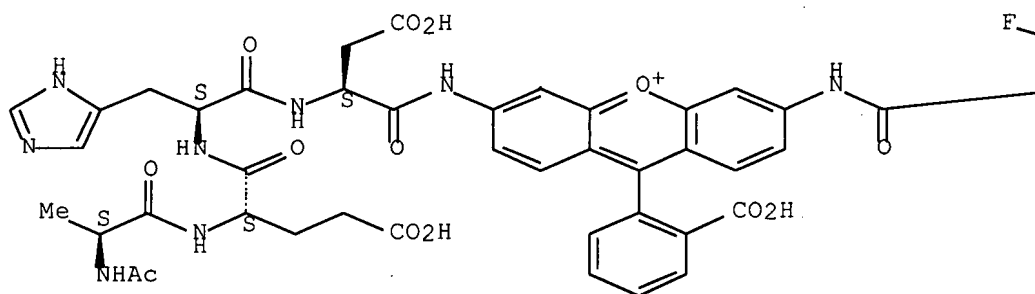


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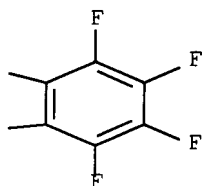
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Absolute stereochemistry.

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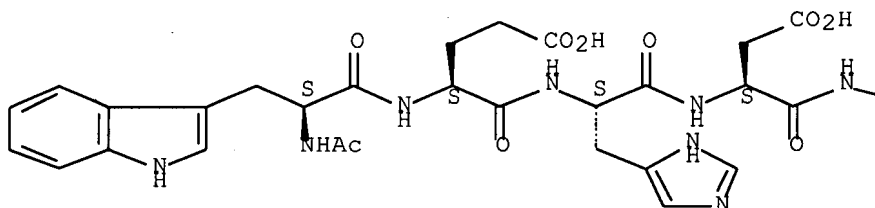


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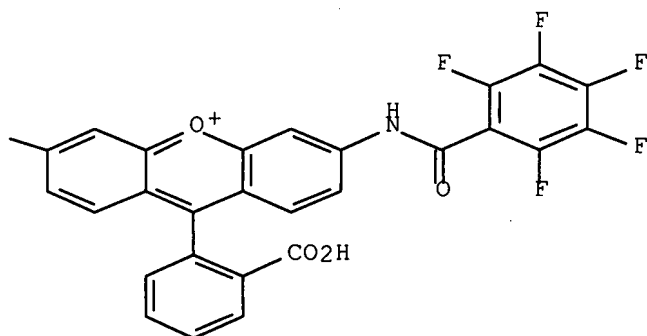
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Absolute stereochemistry.

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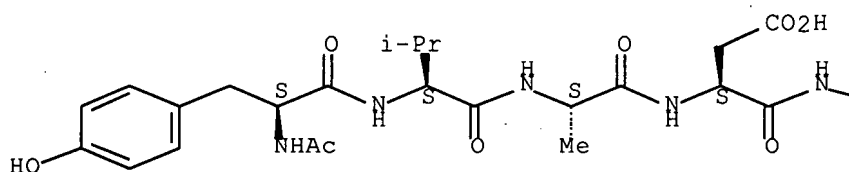


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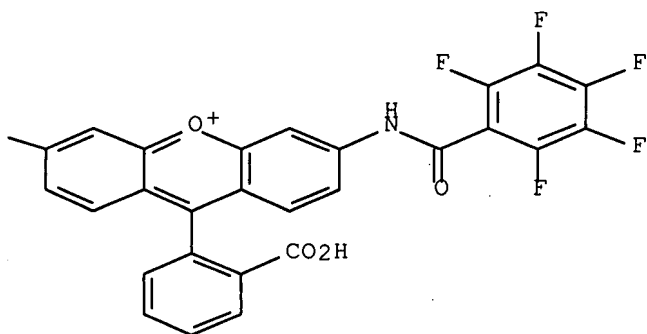
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Absolute stereochemistry.

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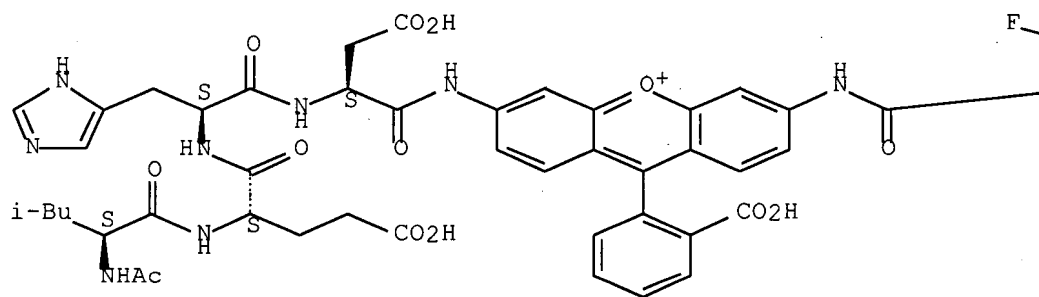
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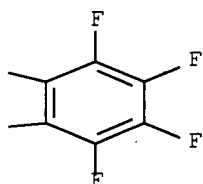
Absolute stereochemistry.



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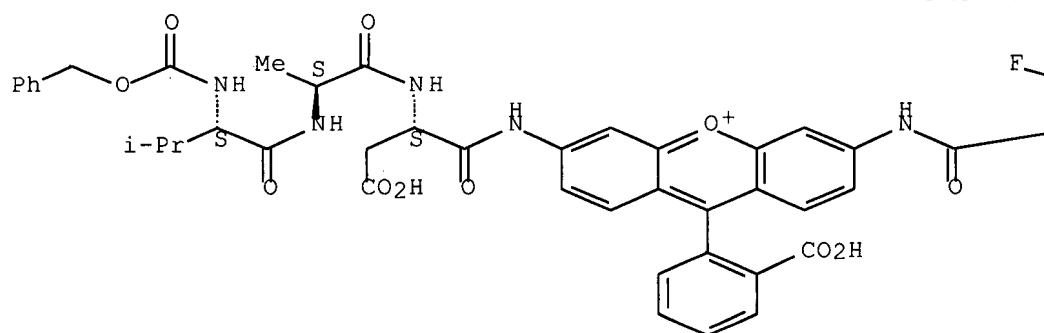


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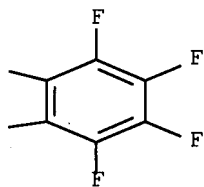
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Absolute stereochemistry.

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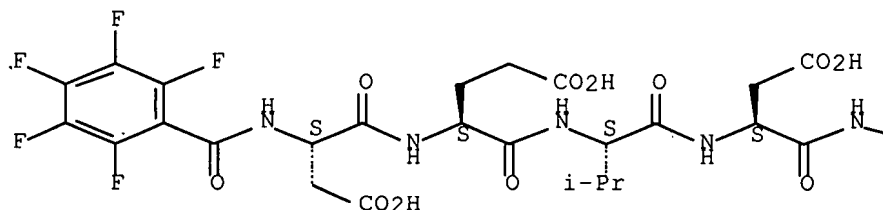


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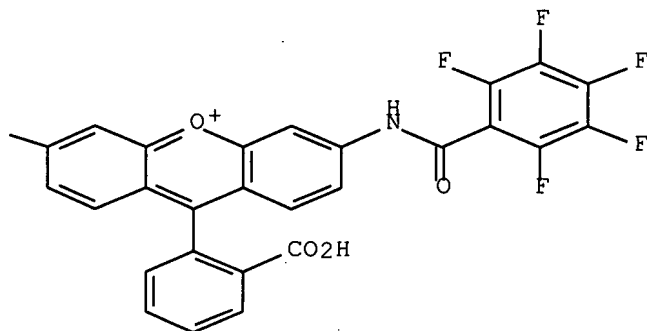
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Absolute stereochemistry.

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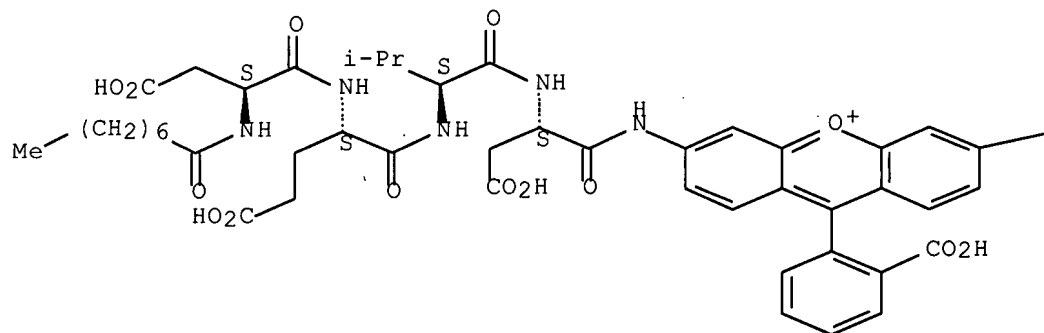


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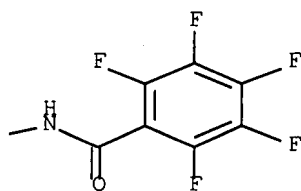
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Absolute stereochemistry.

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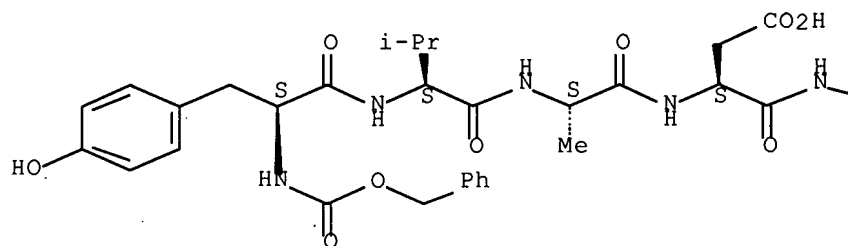


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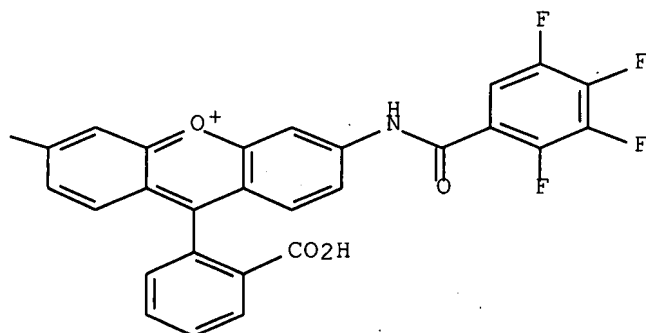
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Absolute stereochemistry.

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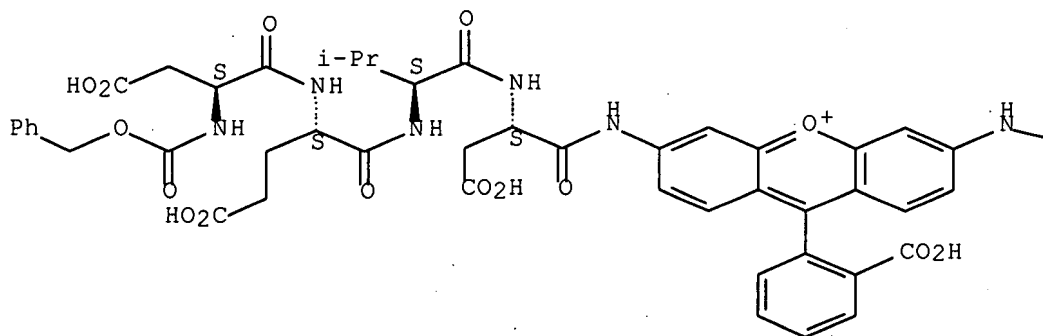


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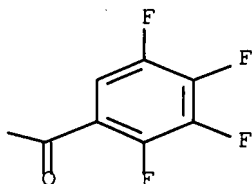
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Absolute stereochemistry.

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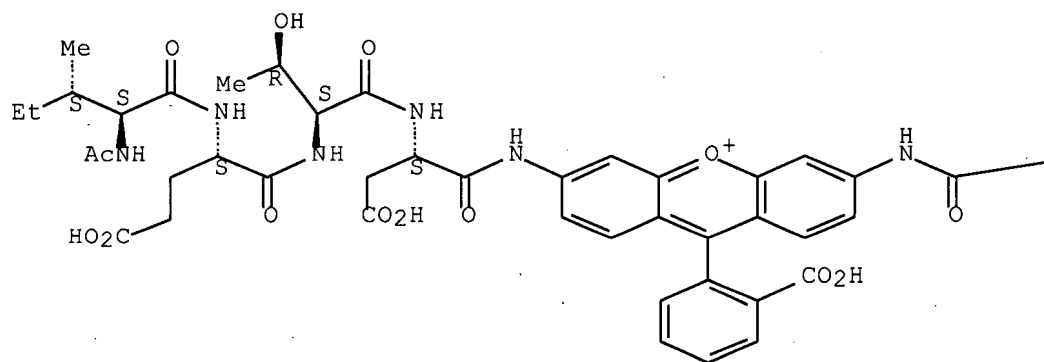


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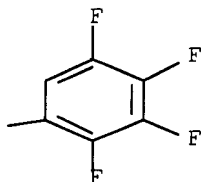
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Absolute stereochemistry.

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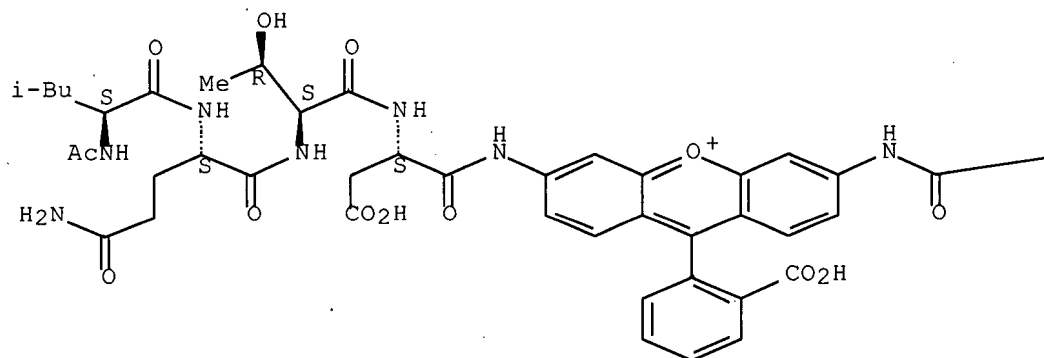


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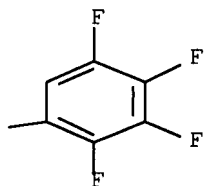
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Absolute stereochemistry.

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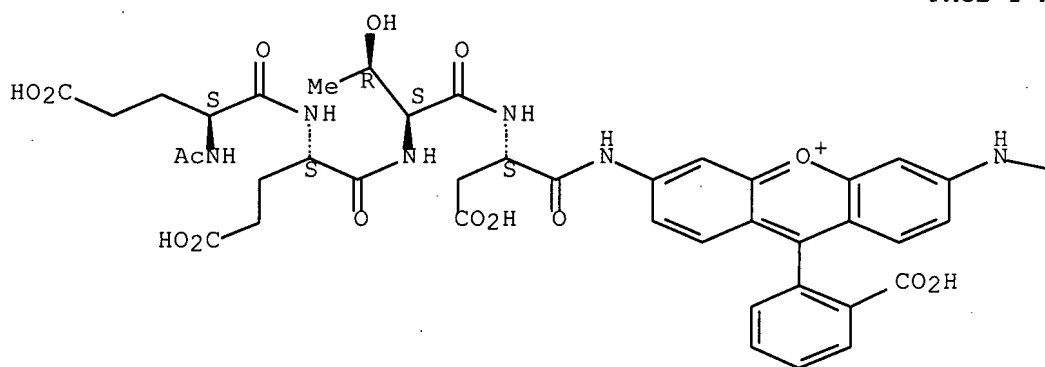


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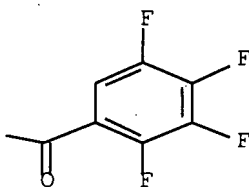
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Absolute stereochemistry.

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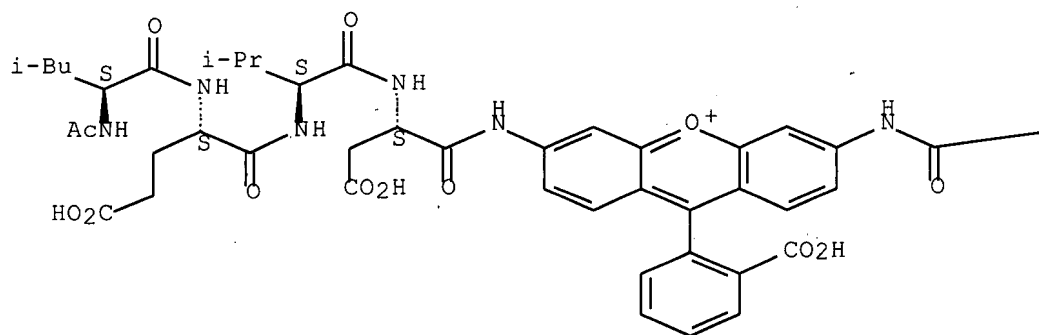


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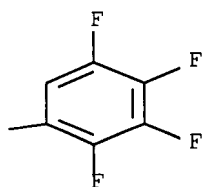
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Absolute stereochemistry.

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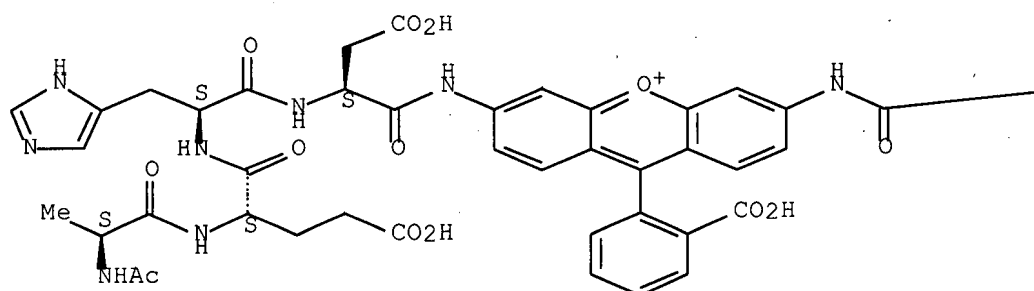


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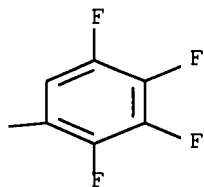
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Absolute stereochemistry.

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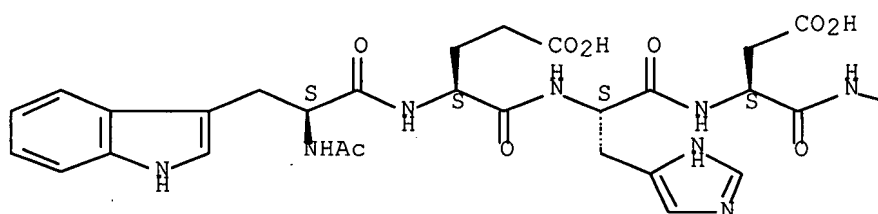


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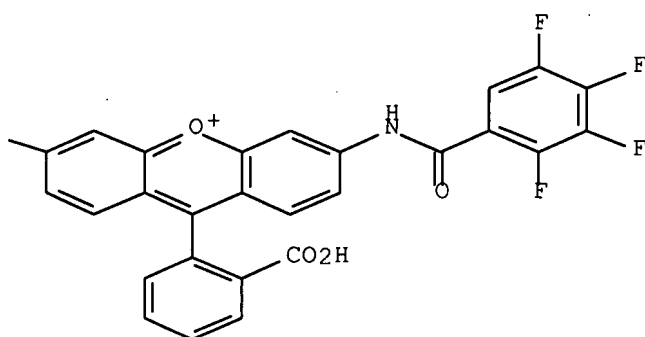
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Absolute stereochemistry.

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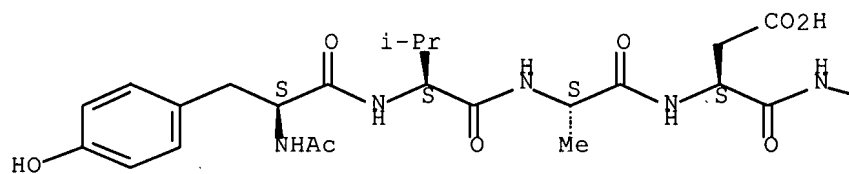
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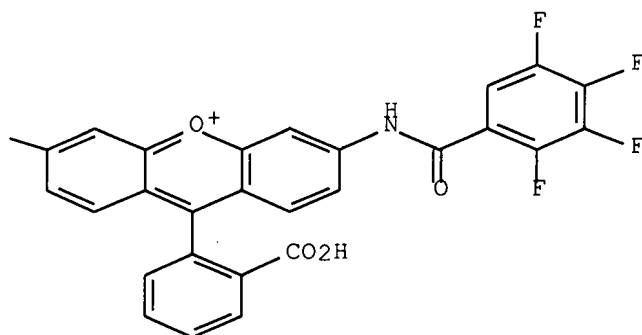
Absolute stereochemistry.



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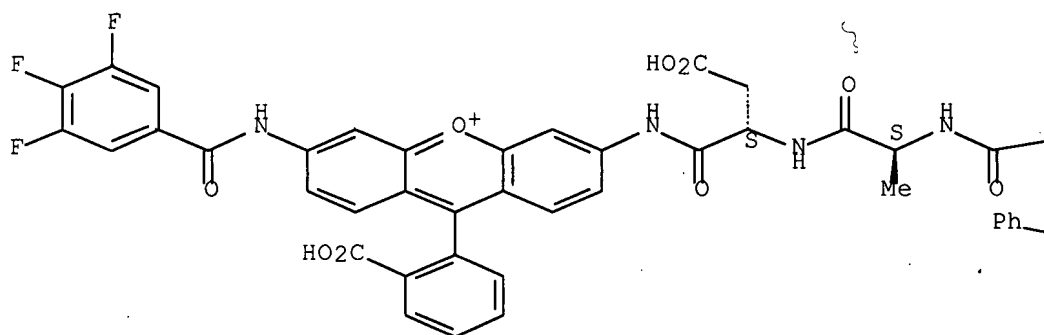


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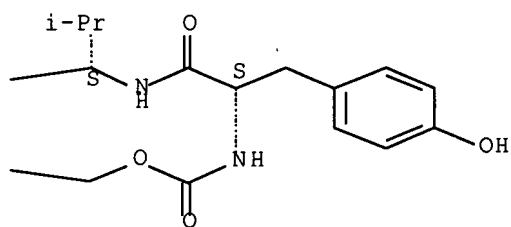
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Absolute stereochemistry.

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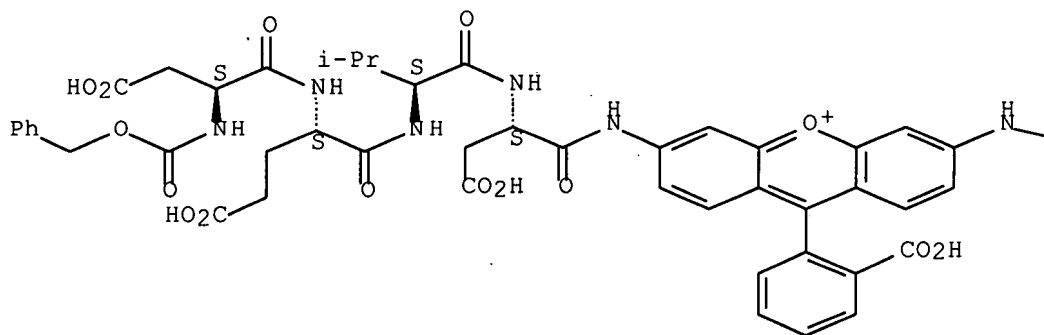


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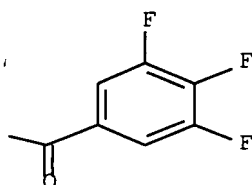
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Absolute stereochemistry.

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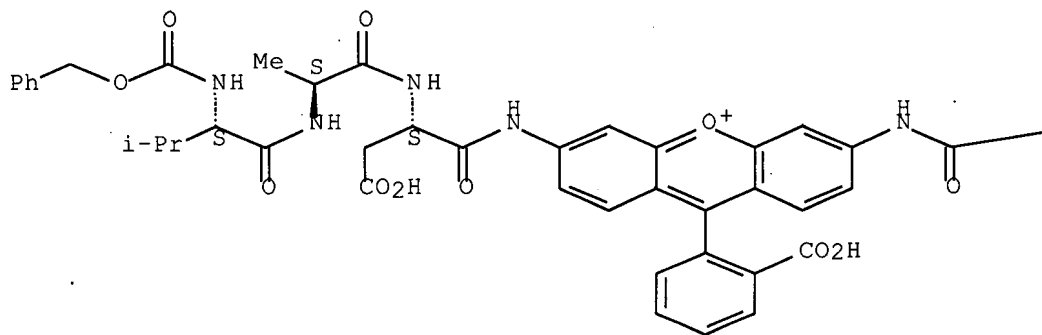


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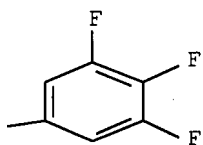
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Absolute stereochemistry.

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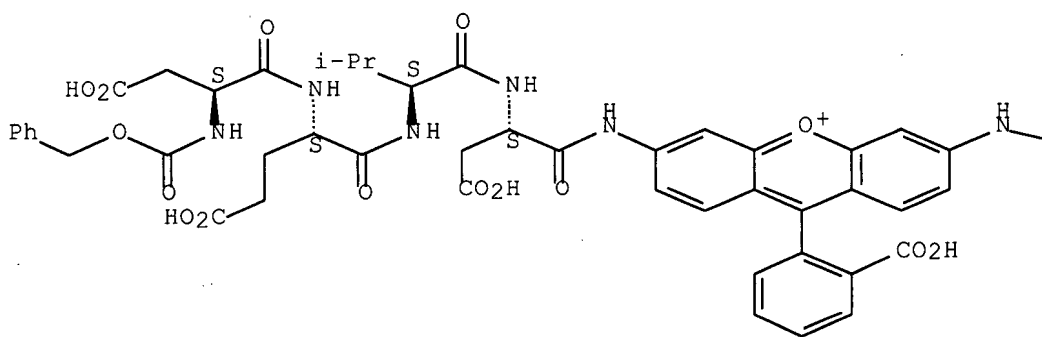


RN 256527-50-1 USPATFULL

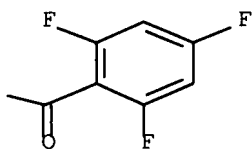
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(2,4,6-trifluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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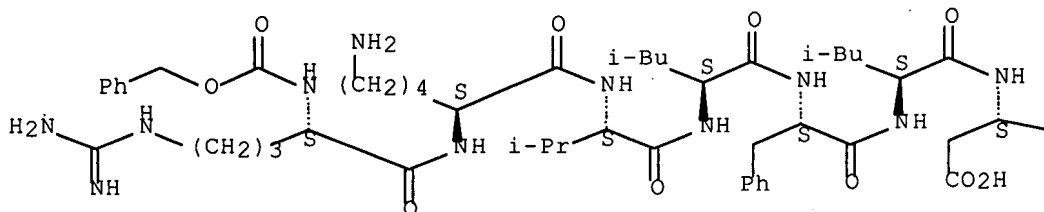


RN 256527-89-6 USPATFULL

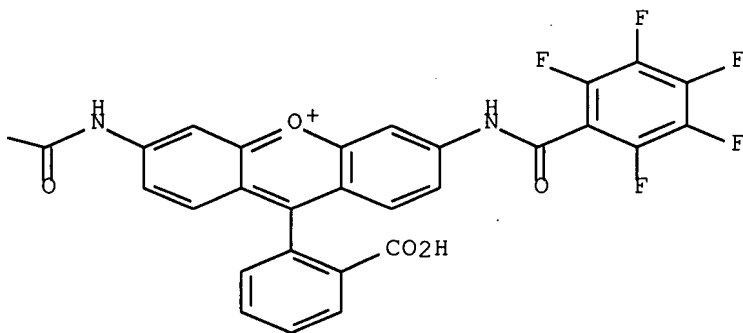
CN L- $\alpha$ -Asparagine, N2-[(phenylmethoxy)carbonyl]-L-arginyl-L-lysyl-L-valyl-L-leucyl-L-phenylalanyl-L-leucyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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IT 256528-72-0P 256528-75-3P 256528-80-0P

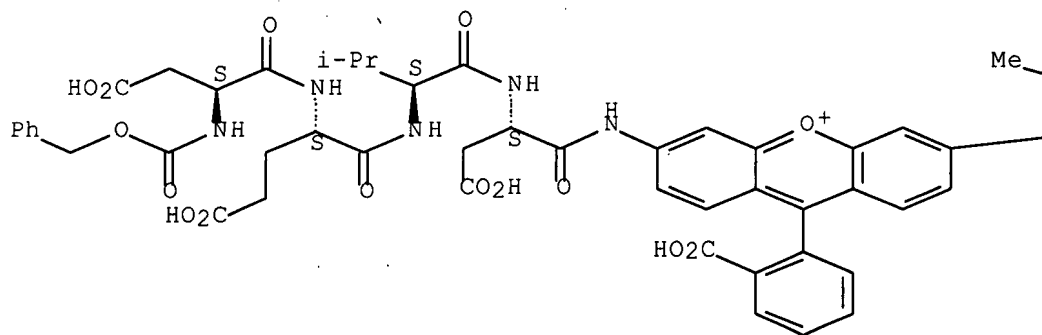
(fluorescence dyes and their applications for whole cell  
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peptidases, proteases and other enzymes)

RN 256528-72-0 USPATFULL

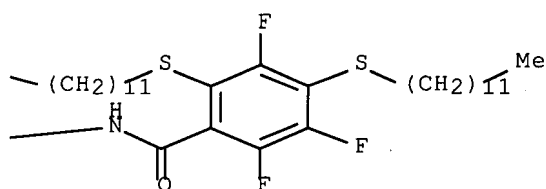
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Absolute stereochemistry.

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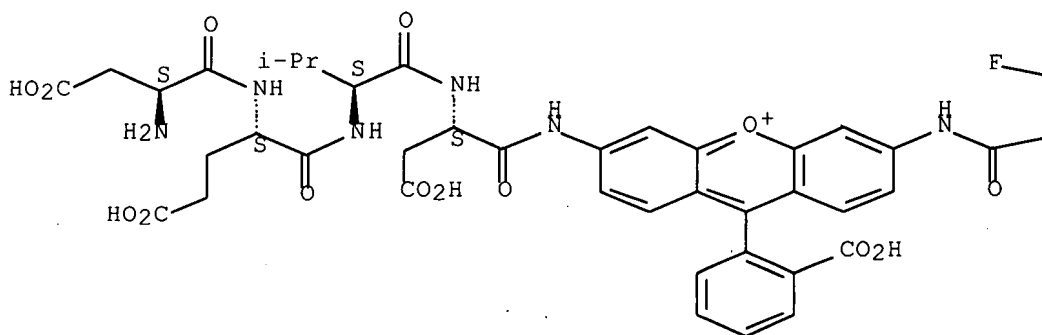


RN 256528-75-3 USPATFULL

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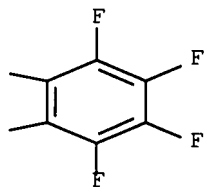
Absolute stereochemistry.

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● HBr

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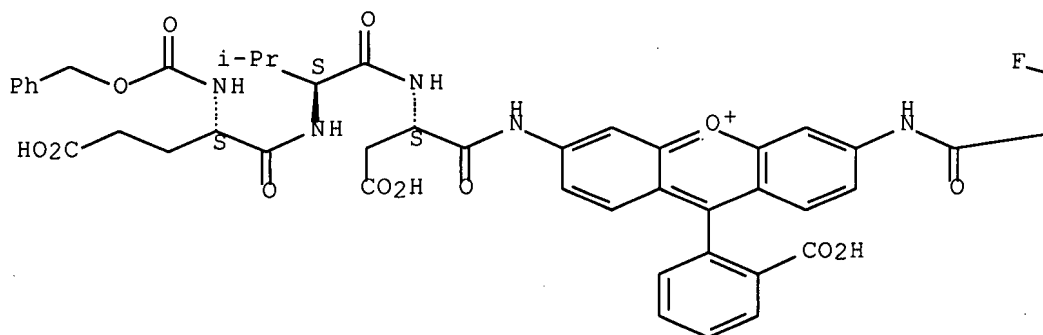


RN 256528-80-0 USPATFULL

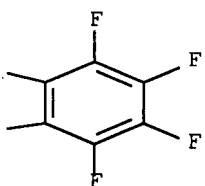
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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IT 256527-37-4P

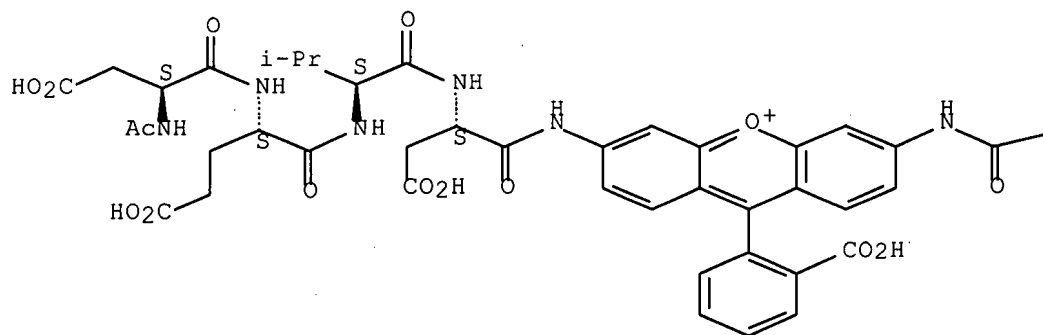
(no counterion specified **fluorescence** dyes and their applications for whole cell **fluorescence screening** assays for caspases, peptidases, proteases and other enzymes)

RN 256527-37-4 USPATFULL

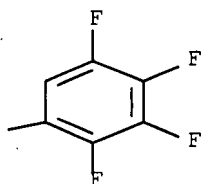
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(2,3,4,5-tetrafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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L41 ANSWER 15 OF 20 USPATFULL on STN  
 ACCESSION NUMBER: 2003:113551 USPATFULL Full-text  
 TITLE: Gambogic acid, analogs and derivatives as activators of caspases and inducers of apoptosis  
 INVENTOR(S): Cai, Sui Xiong, San Diego, CA, UNITED STATES  
 Zhang, Han-Zhong, San Diego, CA, UNITED STATES  
 Kasibhatla, Shailaja, San Diego, CA, UNITED STATES  
 Gaeta, Federico C., Mountain View, CA, UNITED STATES  
 PATENT ASSIGNEE(S): Cytovia, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003078292	A1	20030424
	US 6613762	B2	20030902
APPLICATION INFO.:	US 2002-66805	A1	20020206 (10)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 2000-495120, filed on 1 Feb 2000, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-135424P	19990521 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., SUITE 600, WASHINGTON, DC, 20005-3934	
NUMBER OF CLAIMS:	35	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	6 Drawing Page(s)	
LINE COUNT:	2597	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed to gambogic acid, analogs and derivatives thereof, represented by the general Formulae I-III: ##STR1##

wherein R.sub.1-R.sub.5 are defined herein. The present invention also relates to the discovery that compounds having Formula I-III are activators of caspases and inducers of apoptosis. Therefore, the activators of caspases and inducers of apoptosis of this invention can be used to induce cell death in a variety of clinical conditions in which uncontrolled cell growth and spread of abnormal cells occurs.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L41 ANSWER 16 OF 20 USPATFULL on STN

ACCESSION NUMBER: 2003:37584 USPATFULL Full-text  
 TITLE: Methods of identifying potentially therapeutically selective and effective anti-cancer agents that are inducers of apoptosis  
 INVENTOR(S): Kasibhatla, Shailaja, San Diego, CA, UNITED STATES  
 Reddy, P. Sanjeeva, San Diego, CA, UNITED STATES  
 Drewe, John A., Carlsbad, CA, UNITED STATES  
 PATENT ASSIGNEE(S): Cytovia, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003027229	A1	20030206
APPLICATION INFO.:	US 2002-46548	A1	20020116 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-294617P	20010601 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., SUITE 600, WASHINGTON, DC, 20005-3934	
NUMBER OF CLAIMS:	12	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	7 Drawing Page(s)	
LINE COUNT:	1213	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are methods for identifying potential therapeutically effective anti-cancer agents. In particular, the invention relates to the use of biochemical and cell based screening assays to identify compounds that directly or indirectly activate the apoptosis cascade and further a method for identifying those apoptosis inducers that are selective and effective apoptosis agents for use in treating cancer and other therapeutic indications characterized by a lack of appropriate apoptosis. Also disclosed is a method of identifying selective caspase inducers using a cell-line specific primary screen.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L41 ANSWER 17 OF 20 USPATFULL on STN

ACCESSION NUMBER: 2002:272765 USPATFULL Full-text  
 TITLE: Novel fluorogenic or fluorescent reporter molecules and their applications for whole-cell fluorescence screening assays for caspases and other enzymes and the



use thereof

INVENTOR(S): **Weber, Eckard**, San Diego, CA, UNITED STATES  
**Cai, Sui Xiong**, San Diego, CA, UNITED STATES  
**Keana, John F.W.**, Eugene, OR, UNITED STATES  
**Drewe, John A.**, Carlsbad, CA, UNITED STATES  
**Zhang, Han-Zhong**, Irvine, CA, UNITED STATES

PATENT ASSIGNEE(S): **Cytovia, Inc.** (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002150885	A1	20021017
	US 6759207	B2	20040706
APPLICATION INFO.:	US 2001-947387	A1	20010907 (9)
RELATED APPLN. INFO.:	Division of Ser. No. US 1998-168888, filed on 9 Oct 1998, PATENTED		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-145746P	19980303 (60)
	US 1997-61582P	19971010 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., SUITE 600, WASHINGTON, DC, 20005-3934	
NUMBER OF CLAIMS:	90	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	12 Drawing Page(s)	
LINE COUNT:	4773	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

AB The present invention relates to novel fluorescent dyes, novel fluorogenic and fluorescent reporter molecules and new enzyme assay processes that can be used to detect the activity of caspases and other enzymes involved in apoptosis in whole cells, cell lines and tissue samples derived from any living organism or organ. The reporter molecules and assay processes can be used in drug screening procedures to identify compounds which act as inhibitors or inducers of the caspase cascade in whole cells or tissues. The reagents and assays described herein are also useful for determining the chemosensitivity of human cancer cells to treatment with chemotherapeutic drugs. The present invention also relates to novel fluorogenic and fluorescent reporter molecules and new enzyme assay processes that can be used to detect the activity of type 2 methionine aminopeptidase, dipeptidyl peptidase IV, calpain, aminopeptidase, HIV protease, adenovirus protease, HSV-1 protease, HCMV protease and HCV protease.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 220846-75-3DP, N-blocked 220846-80-0DP, N-blocked  
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223538-41-8DP, N-blocked 223538-42-9DP, N-blocked  
223538-43-0DP, N-blocked 223538-44-1DP, N-blocked  
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223538-53-2DP, N-blocked 223538-54-3DP, N-blocked  
223538-55-4DP, N-blocked 223538-56-5DP, N-blocked  
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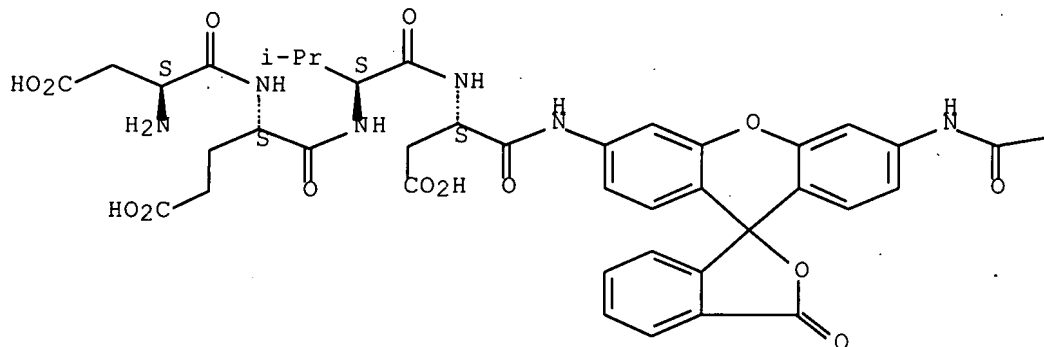
(novel fluorescent reporter mols. and their applications including assays for caspases)

RN 220846-75-3 USPTAFULL

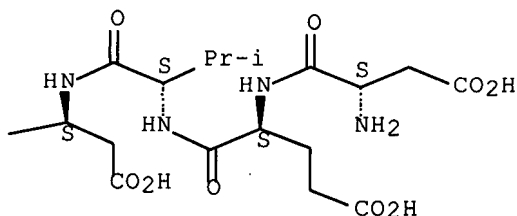
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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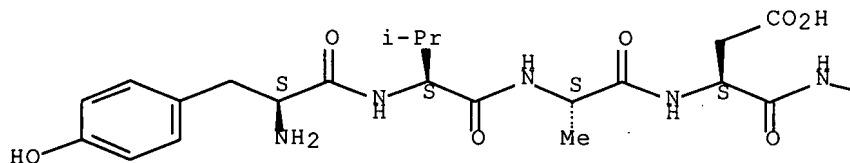


RN 220846-80-0 USPTAFULL

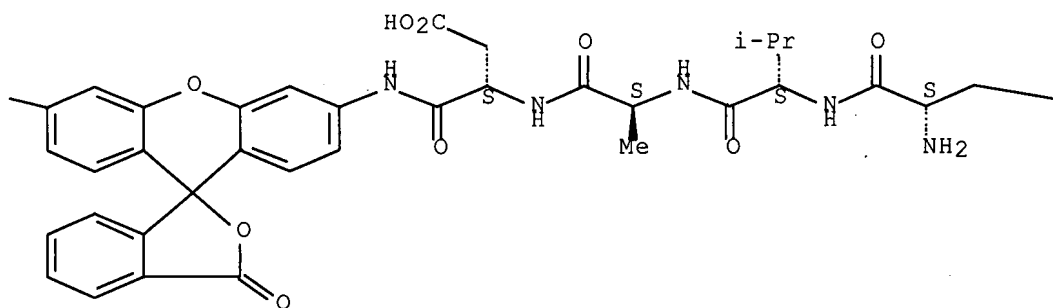
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-tyrosyl-L-valyl-L-alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

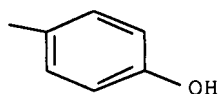
PAGE 1-A



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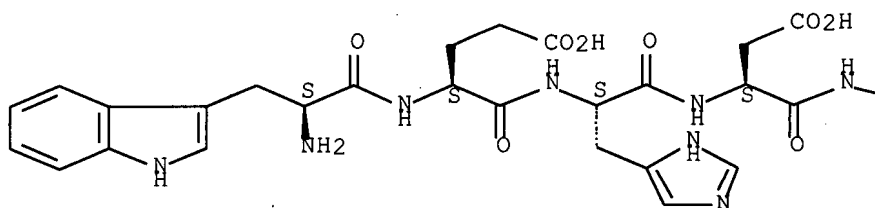


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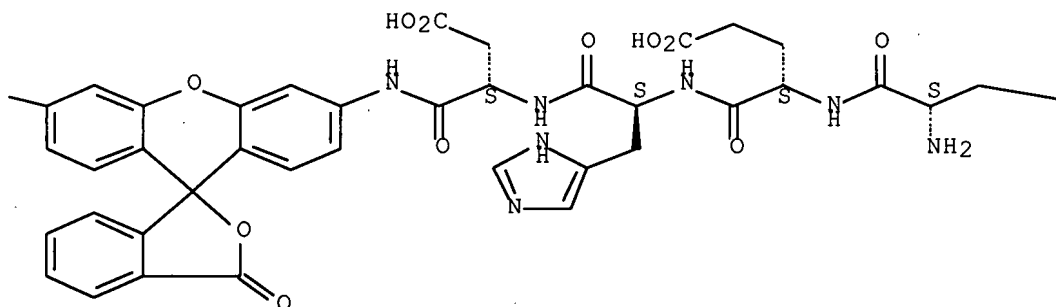
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-tryptophyl-L- $\alpha$ -glutamyl-L-histidyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

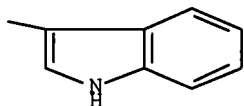
PAGE 1-A



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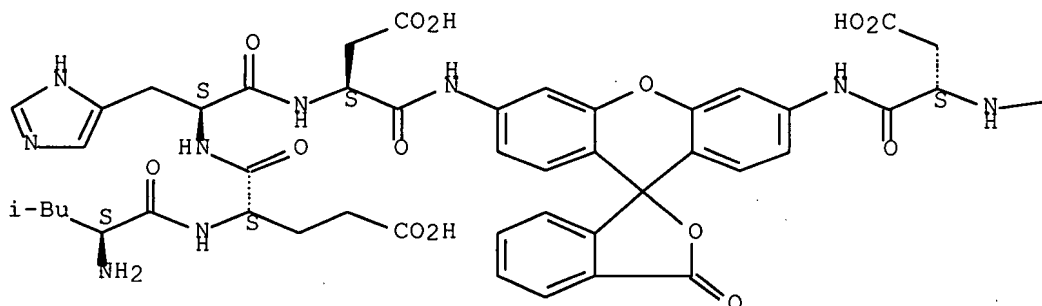


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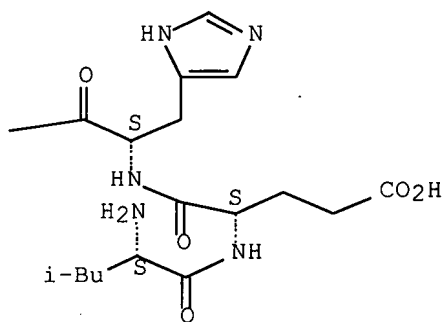
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L-leucyl-L- $\alpha$ -glutamyl-L-histidyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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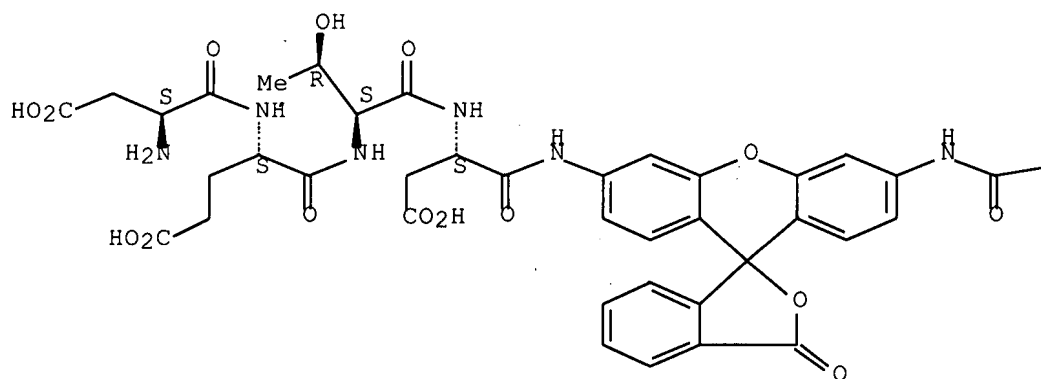


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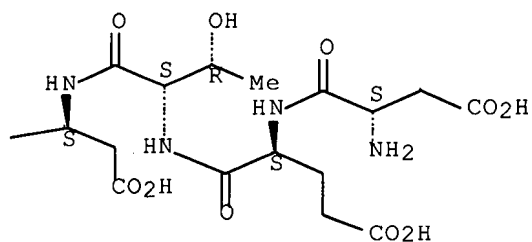
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-threonyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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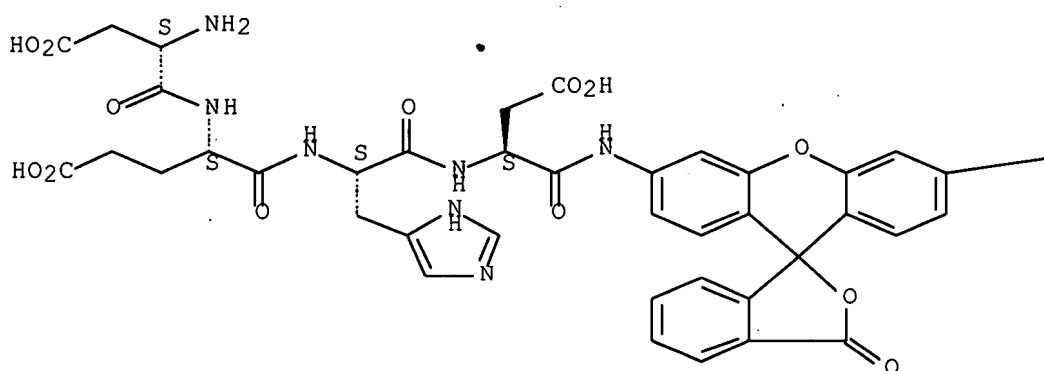
RN 223538-42-9 USPATFULL

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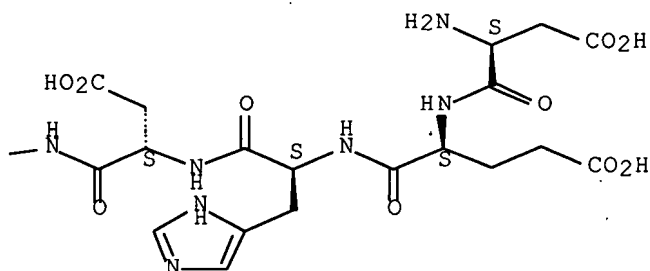
histidyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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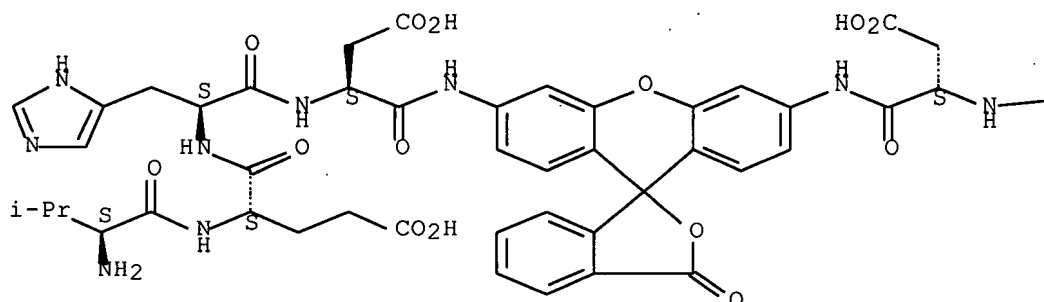


RN 223538-43-0 USPATFULL

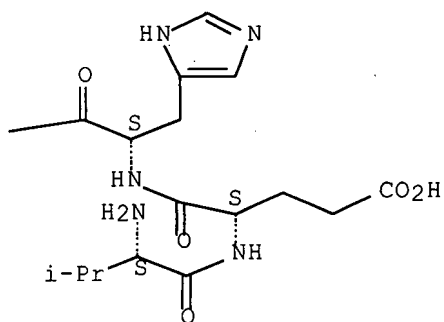
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-valyl-L- $\alpha$ -glutamyl-L-histidyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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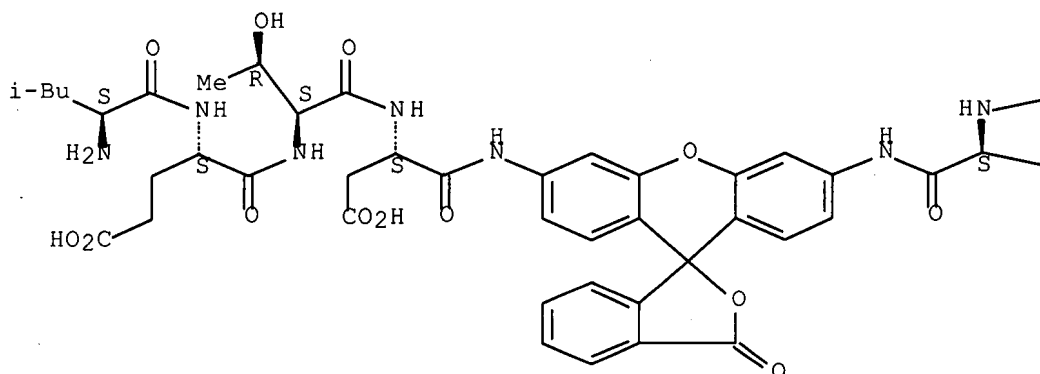


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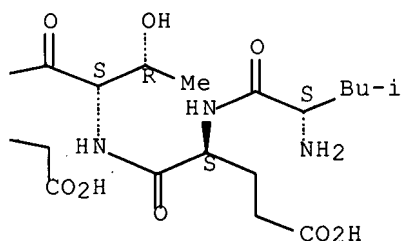
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-leucyl-L- $\alpha$ -glutamyl-L-threonyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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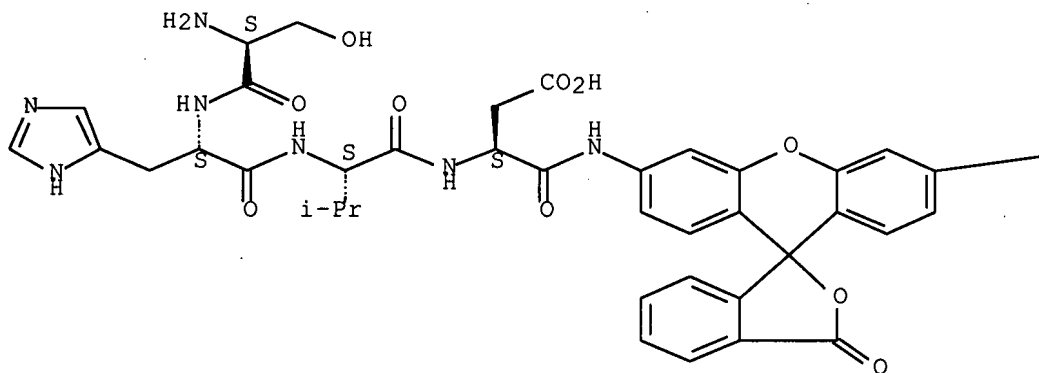


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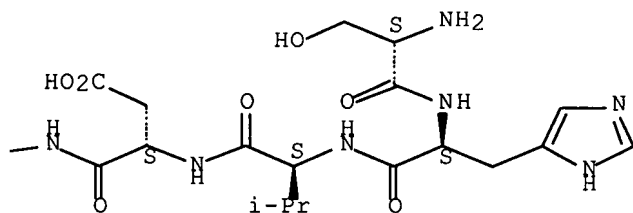
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-seryl-L-histidyl-L-valyl- (9CI) (CA  
INDEX NAME)

Absolute stereochemistry.

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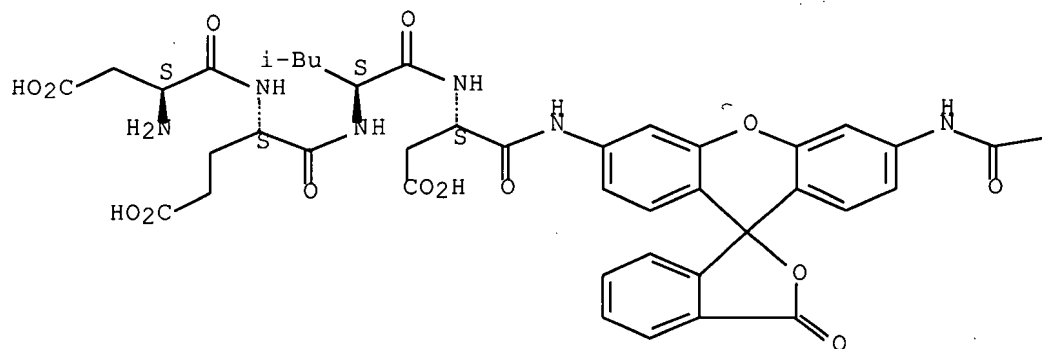
RN 223538-46-3 USPATFULL

CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
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leucyl- (9CI) (CA INDEX NAME)

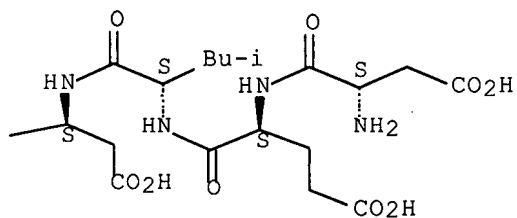
Absolute stereochemistry.



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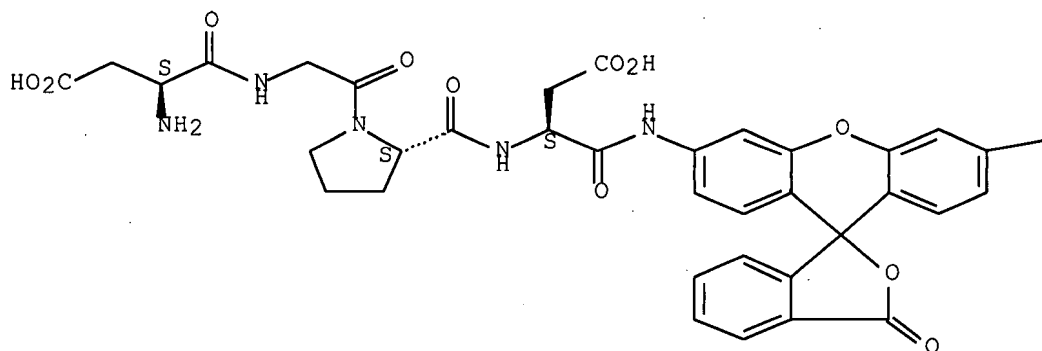


RN 223538-47-4 USPATFULL

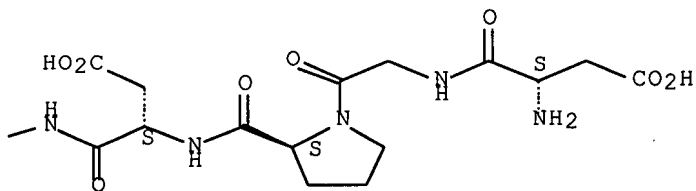
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartylglycyl-L-prolyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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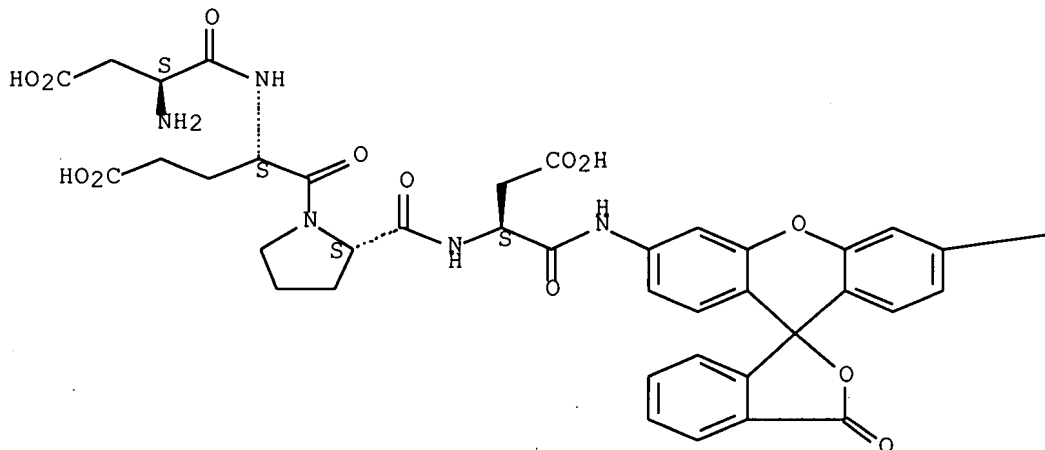


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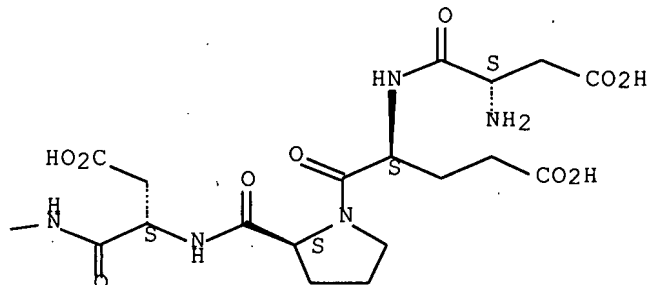
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Absolute stereochemistry.

PAGE 1-A



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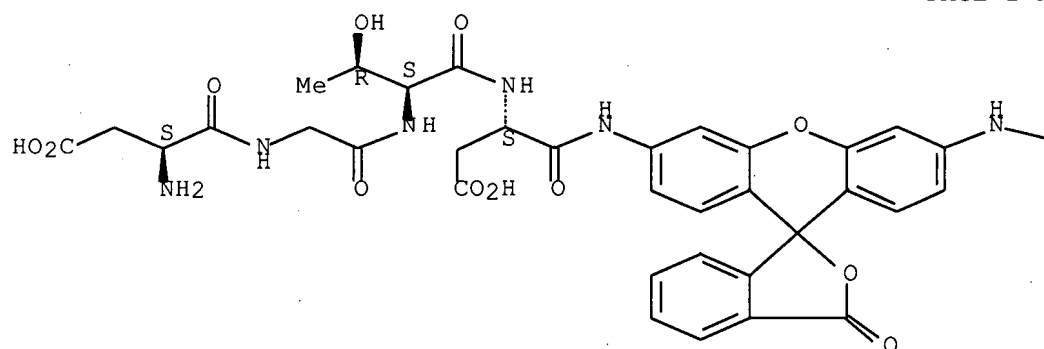


RN 223538-49-6 USPATFULL

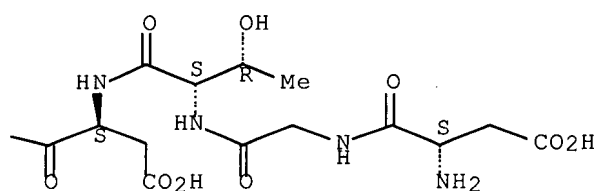
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartylglycyl-L-threonyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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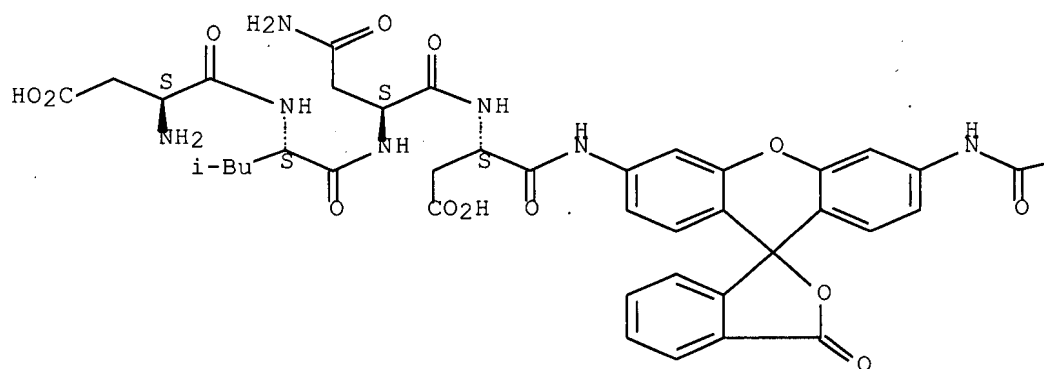


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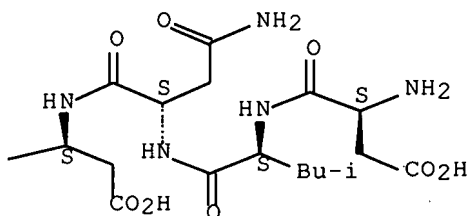
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L-leucyl-L-asparaginyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

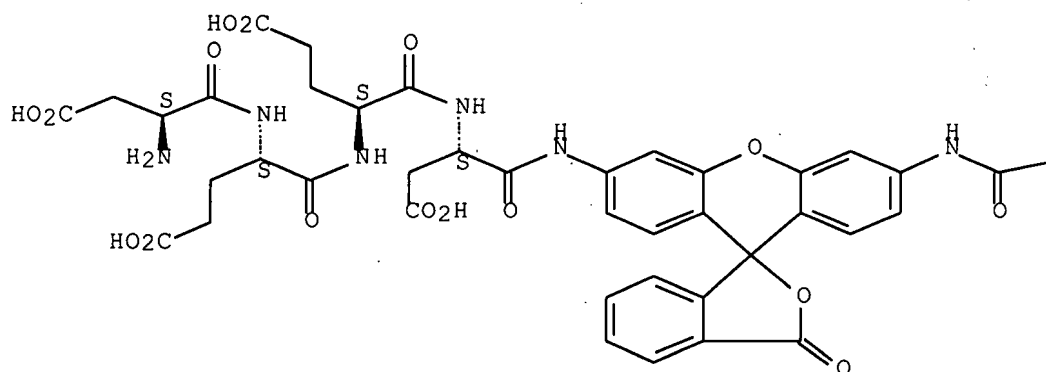


RN 223538-51-0 USPATFULL.

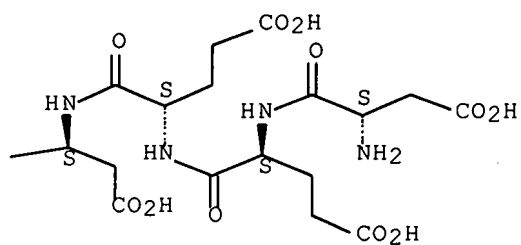
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-α-aspartyl-L-α-glutamyl-L-  
α-glutamyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

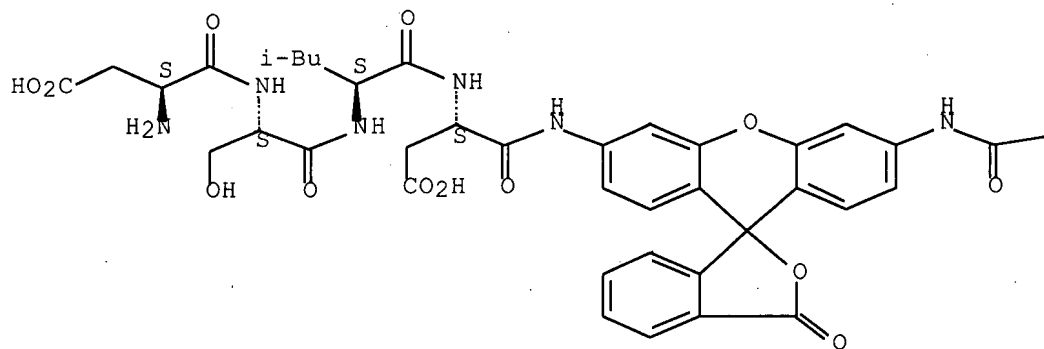


RN 223538-52-1 USPATFULL

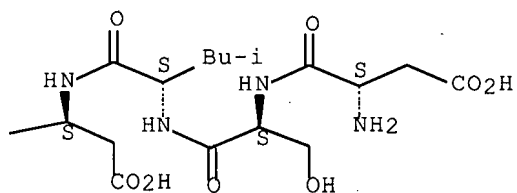
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-α-aspartyl-L-seryl-L-leucyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B

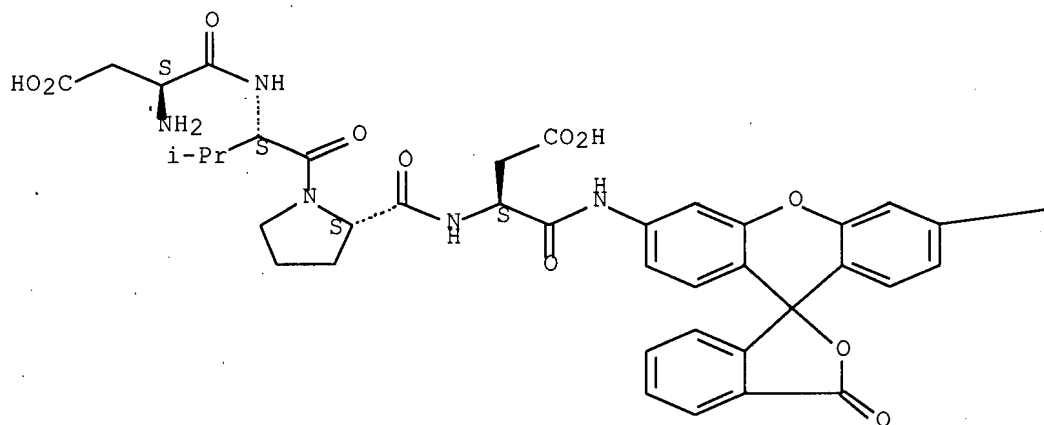


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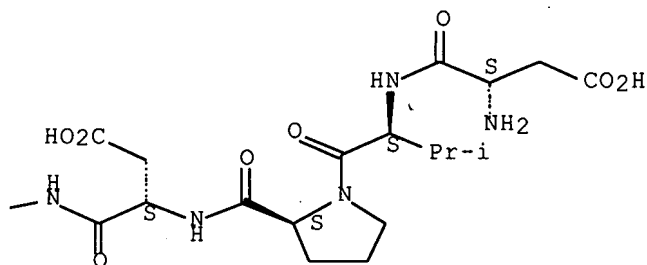
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L-valyl-L-prolyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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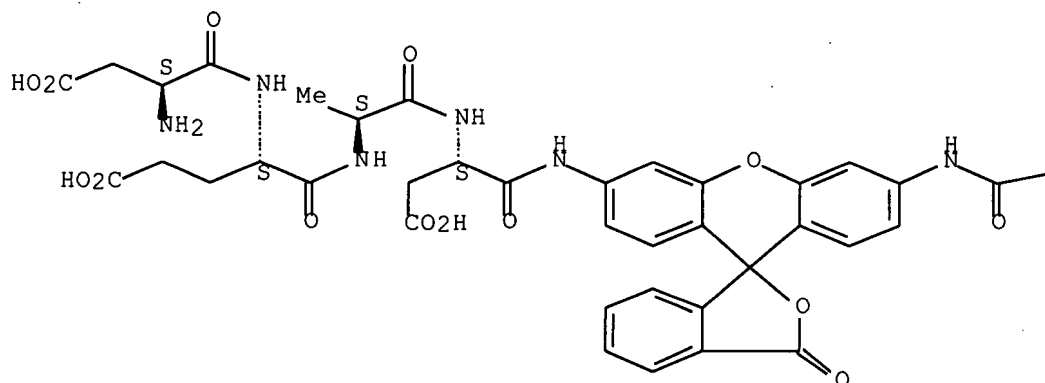


RN 223538-54-3 USPATFULL

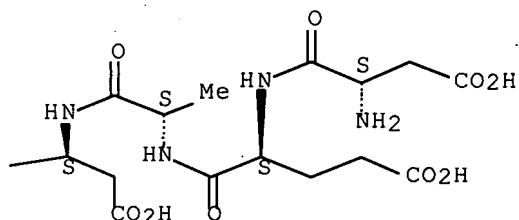
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B

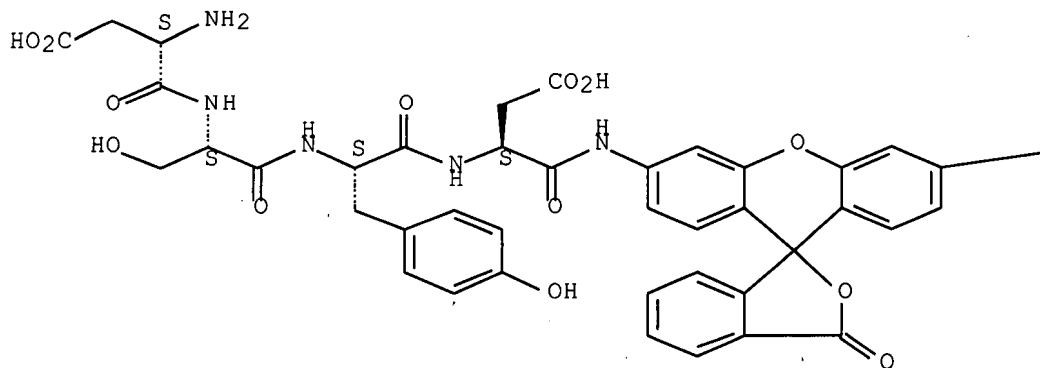


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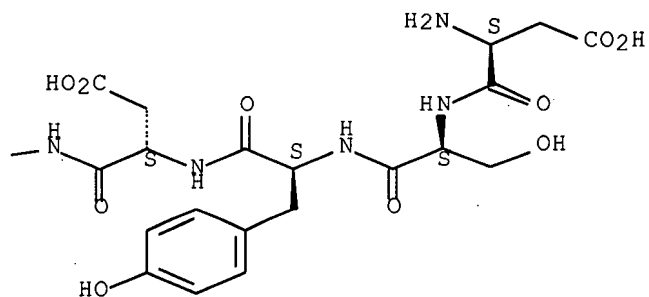
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L-seryl-L-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B

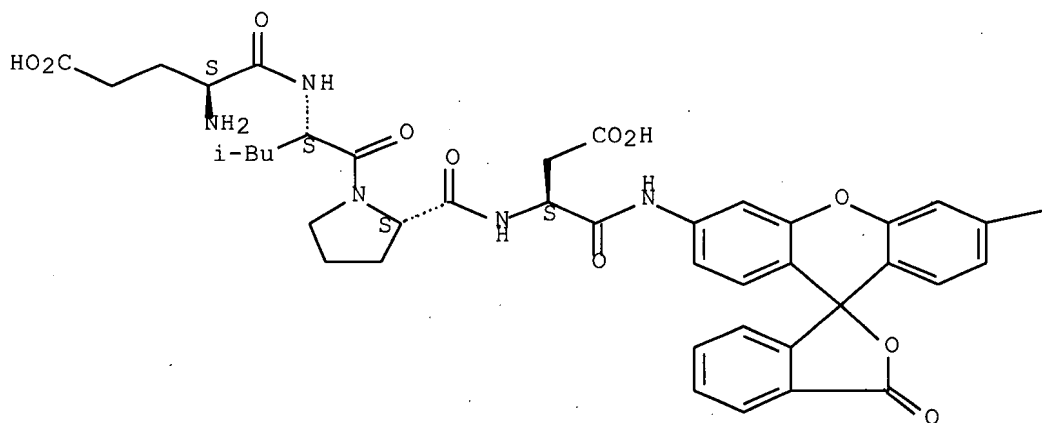


RN 223538-56-5 USPATFULL

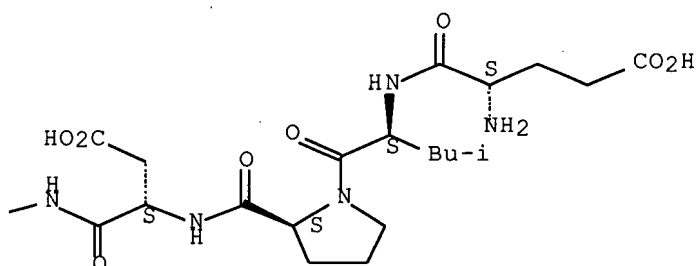
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L-α-glutamyl-L-leucyl-L-prolyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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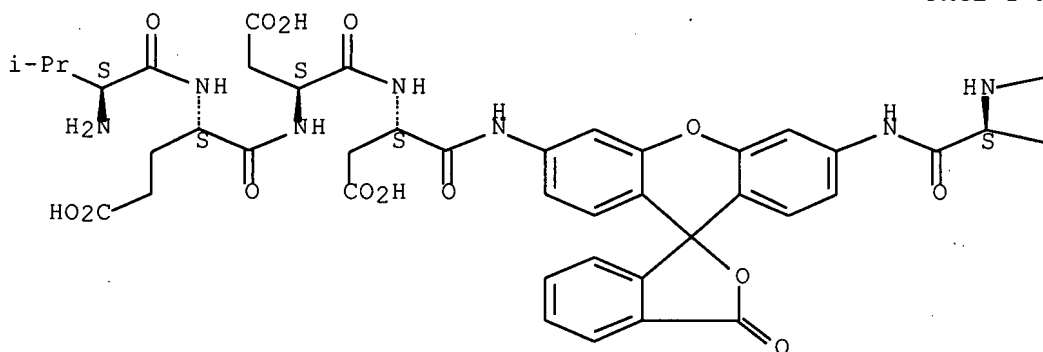


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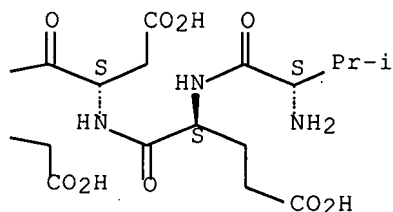
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-valyl-L-α-glutamyl-L-α-  
aspartyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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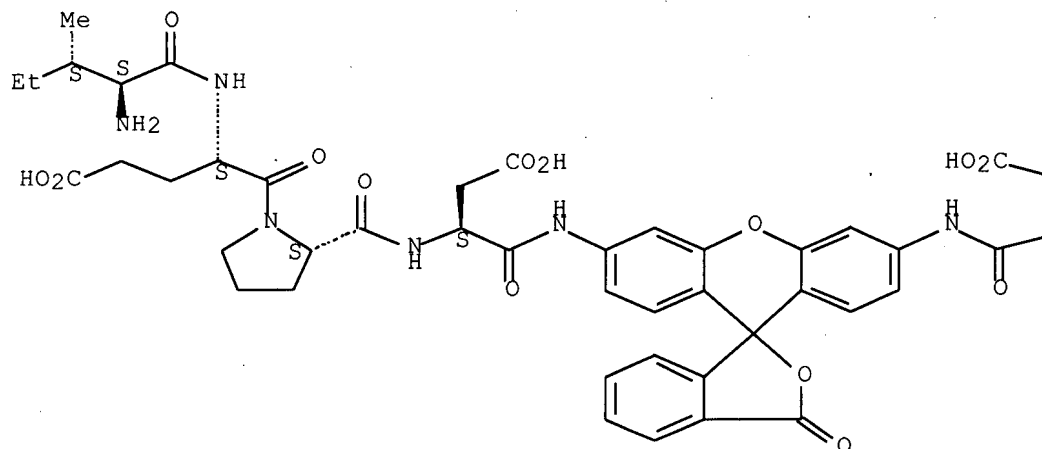
RN 223538-58-7 USPATFULL

CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
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(9CI) (CA INDEX NAME)

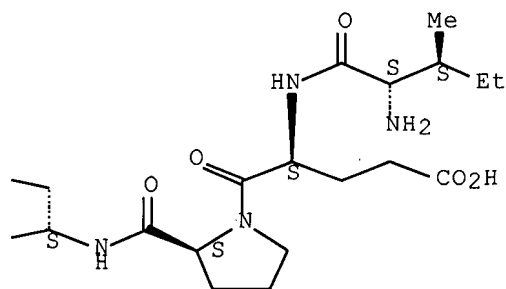


Absolute stereochemistry.

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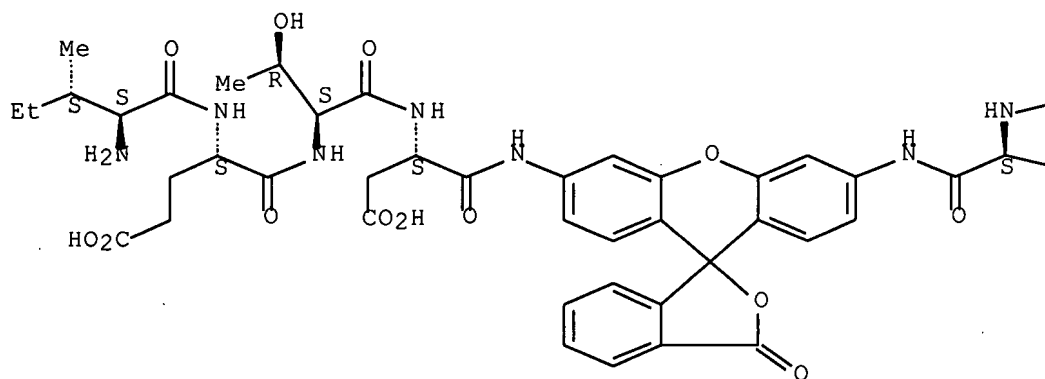


RN 223538-59-8 USPATFULL

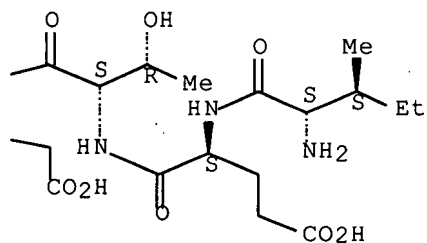
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L-isoleucyl-L-α-glutamyl-L-threonyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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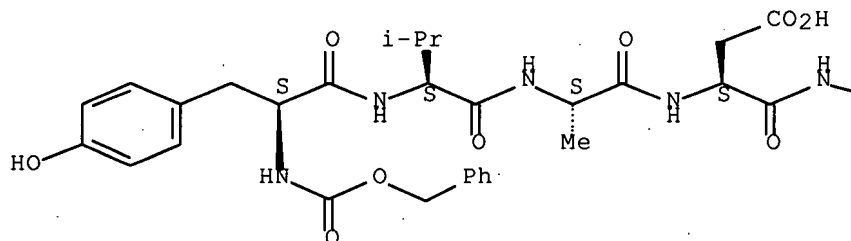


RN 223538-60-1 USPATFULL

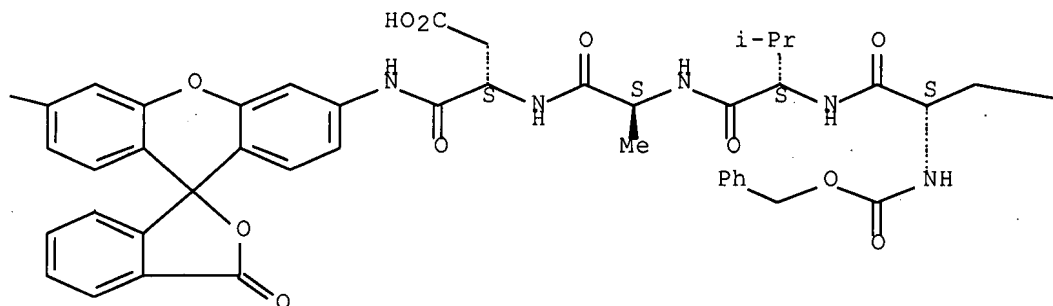
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diylbis[N-[(phenylmethoxy)carbonyl]-L-tyrosyl-L-valyl-L-alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

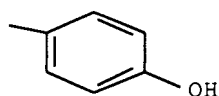
PAGE 1-A



PAGE 1-B



PAGE 1-C

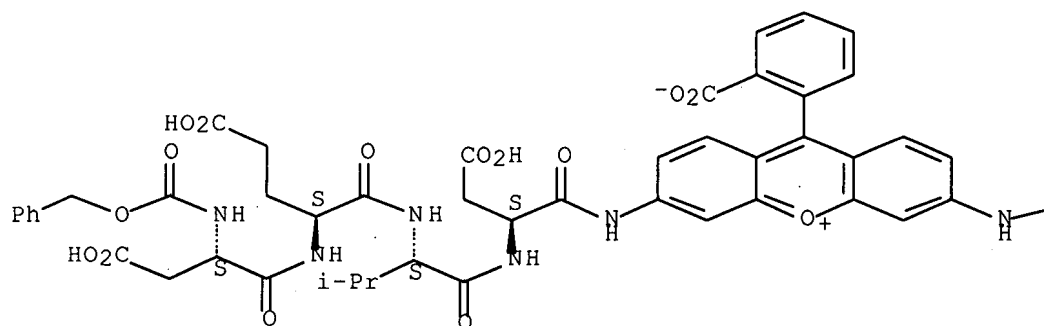


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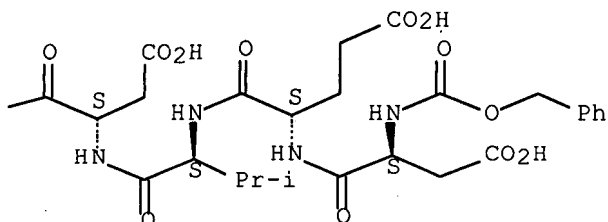
CN L- $\alpha$ -Asparagine, 4,4'-[9-(2-carboxyphenyl)xanthylum-3,6-diyl]bis[N-  
[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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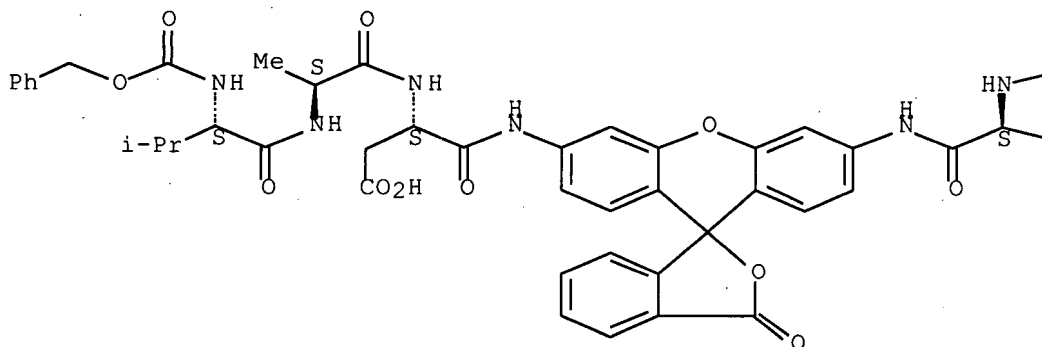


RN 223538-62-3 USPATFULL

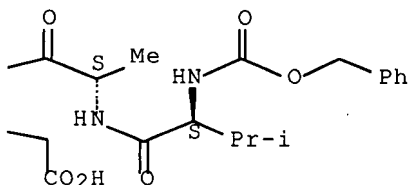
CN L-α-Asparagine, 3,3'-(3-oxospiro[isobenzofuran-1(3H),9'-(9H)xanthene]-3',6'-diyl)bis[N-[(phenylmethoxy)carbonyl]-L-valyl-L-alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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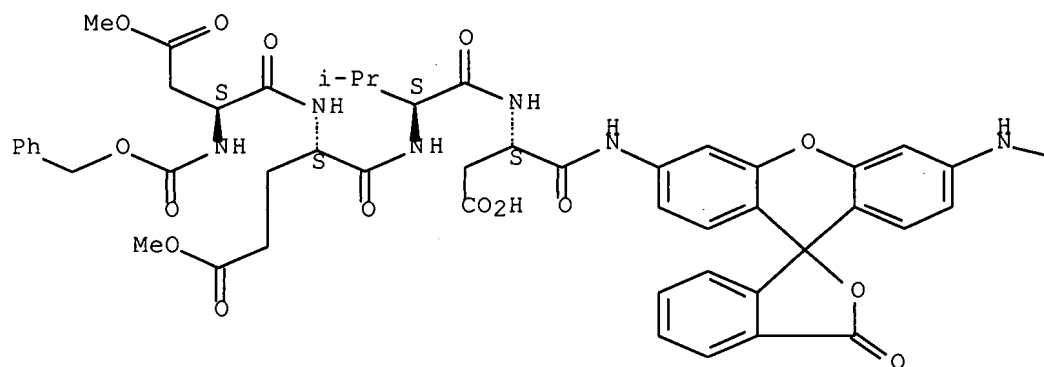


RN 223538-68-9 USPATFULL

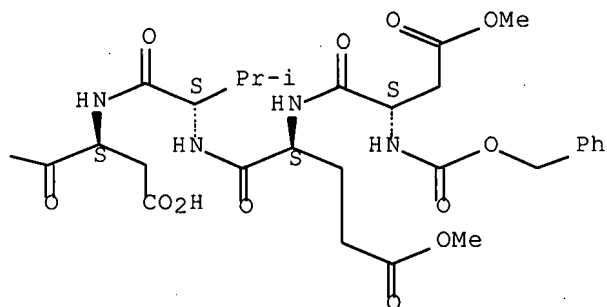
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-(9H)xanthene]-3',6'-diyl)bis[N-[(phenylmethoxy)carbonyl]-L-α-aspartyl-L-α-glutamyl-L-valyl-, 1,1',2,2'-tetramethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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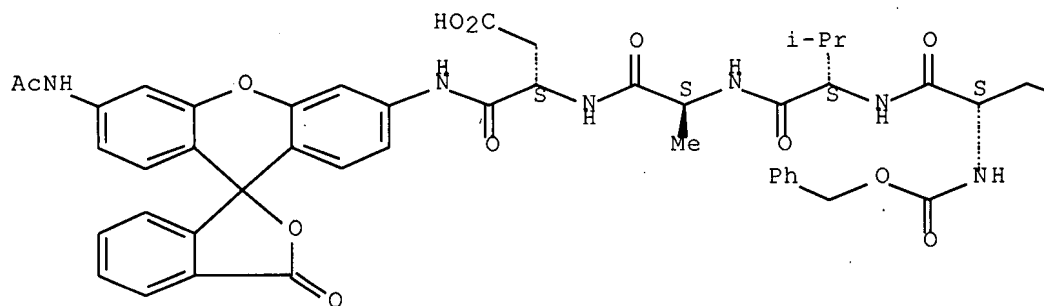


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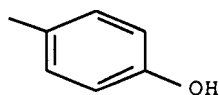
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-tyrosyl-L-valyl-L-alanyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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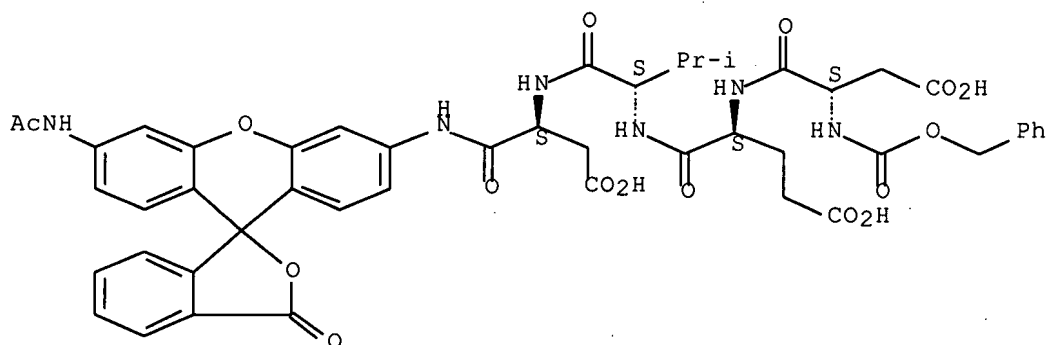
PAGE 1-B



RN 223538-73-6 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

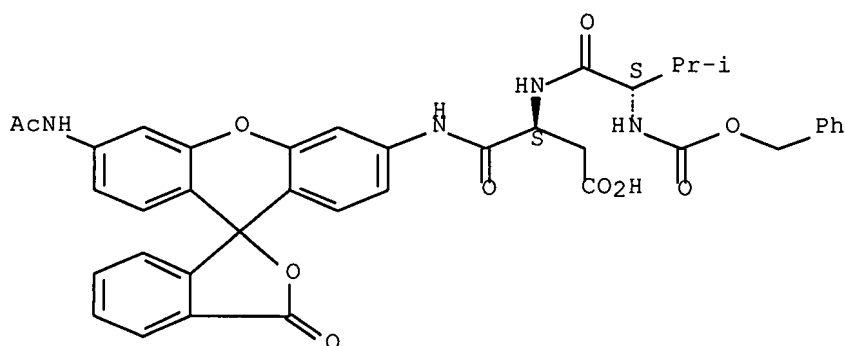
Absolute stereochemistry.



RN 223538-74-7 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

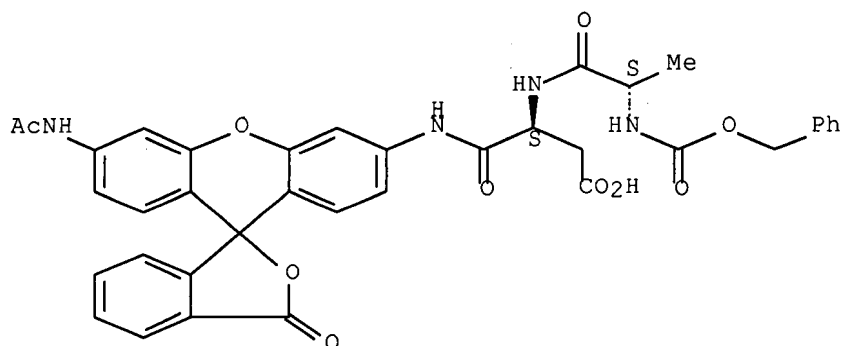
Absolute stereochemistry.



RN 223538-75-8 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-alanyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

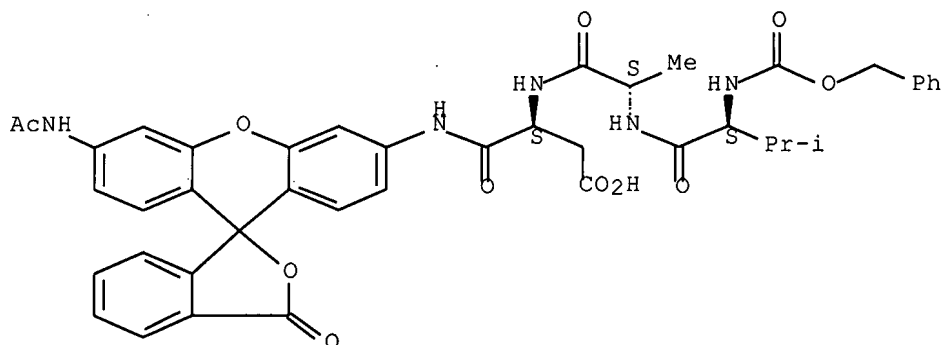
Absolute stereochemistry.



RN 223538-76-9 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-L-alanyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

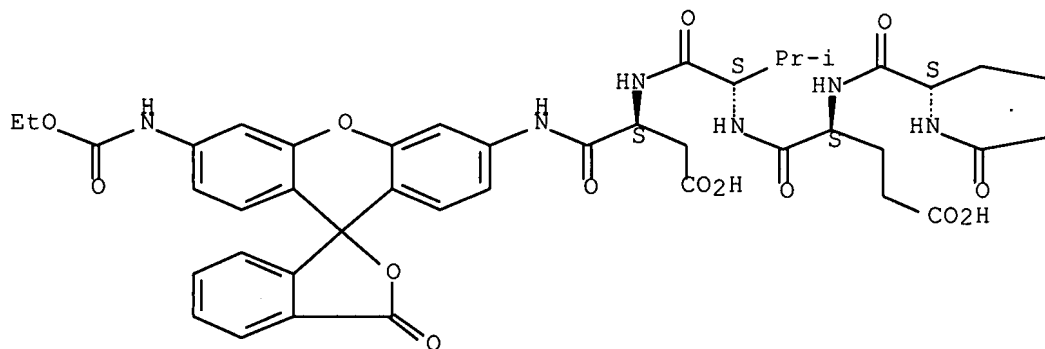


RN 223538-77-0 USPATFULL

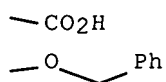
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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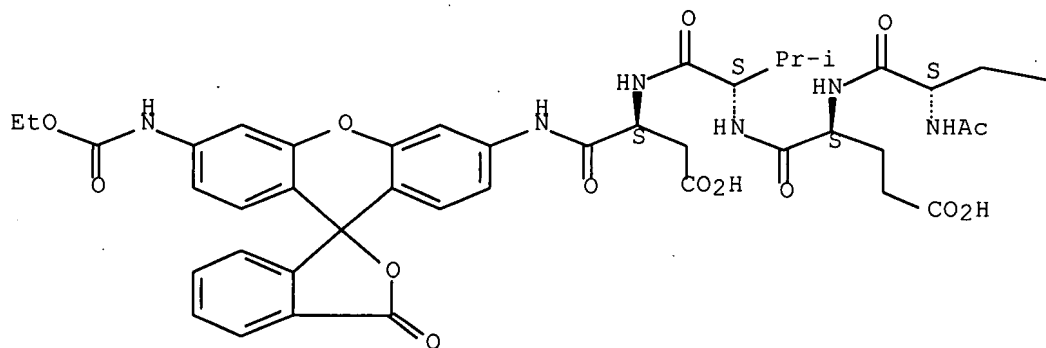


RN 223538-78-1 USPATFULL

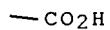
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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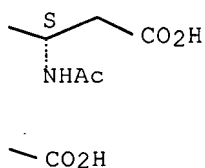
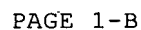
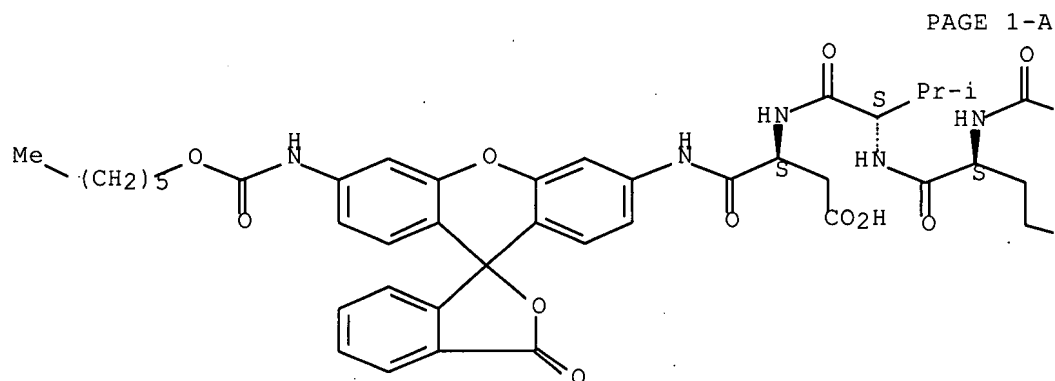




RN 223538-79-2 USPATFULL

CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[(hexyloxy)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

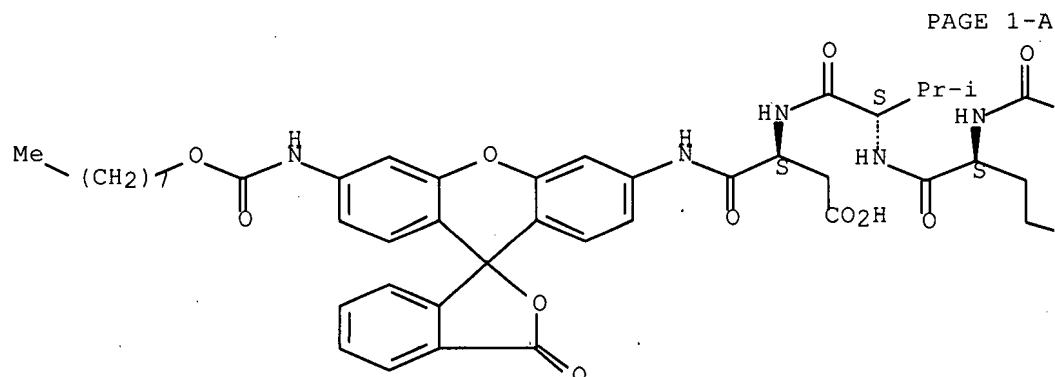
Absolute stereochemistry.



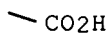
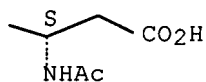
RN 223538-80-5 USPATFULL

CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[ (octyloxy) carbonyl] amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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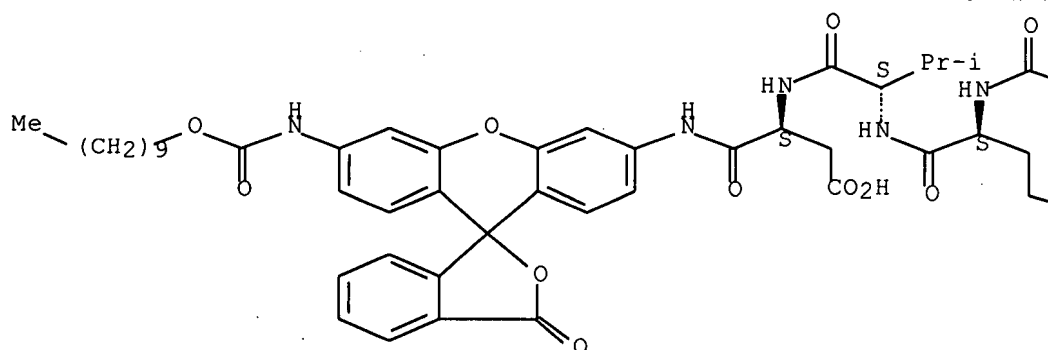


RN 223538-84-9 USPATFULL

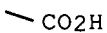
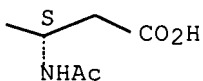
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[[(decyloxy)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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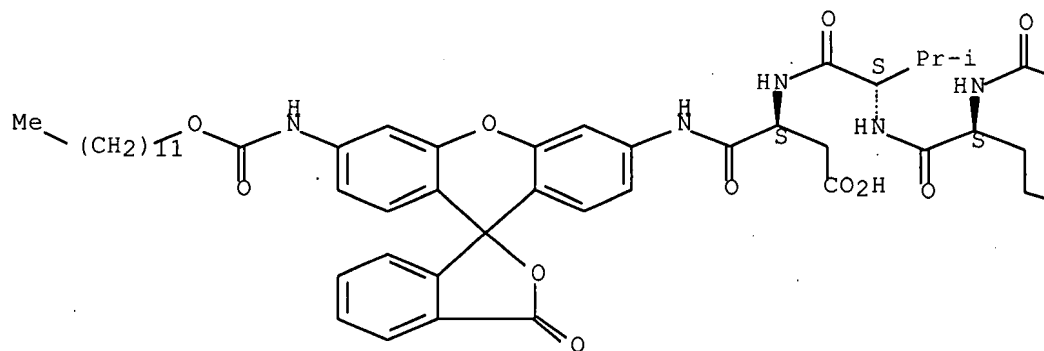


RN 223538-86-1 USPATFULL

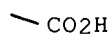
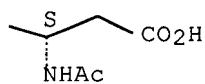
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[[(dodecyloxy)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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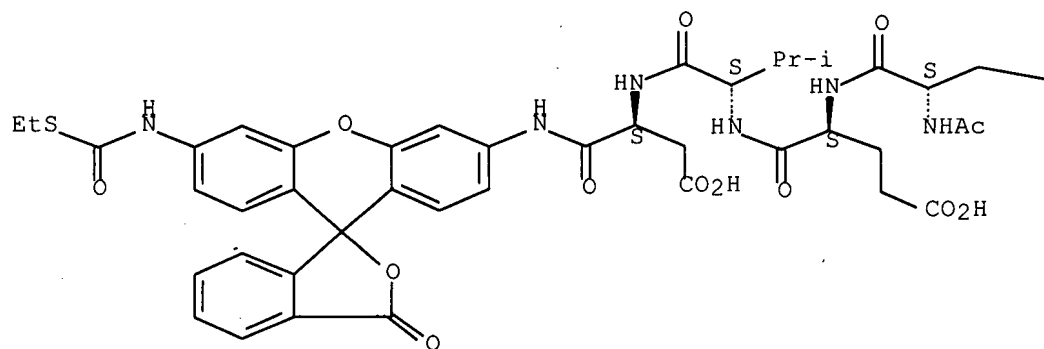


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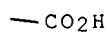
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[[(ethylthio)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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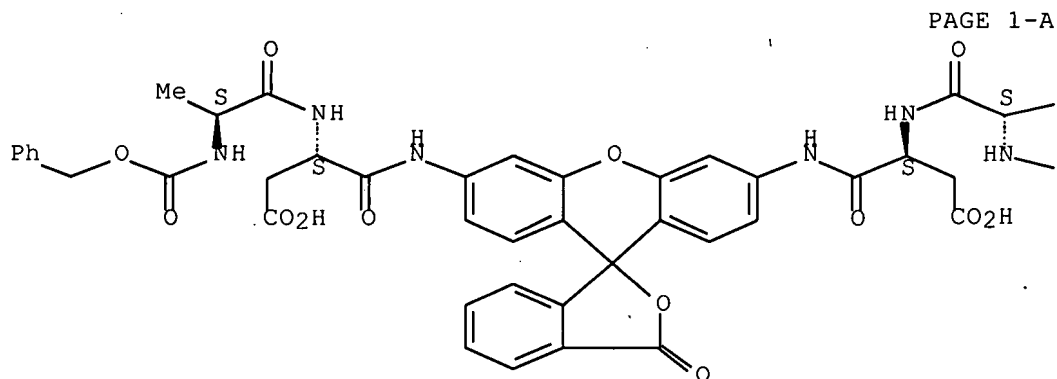
IT 223539-51-3P 223539-54-6P 223539-65-9P  
223539-78-4P

(novel **fluorescent** reporter mols. and their applications  
including assays for caspases)

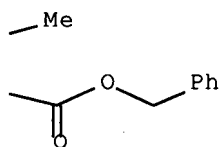
RN 223539-51-3 USPATFULL

CN L- $\alpha$ -Asparagine, 2,2'-[(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)diimino]bis[N-[(phenylmethoxy)carbonyl]-L-  
alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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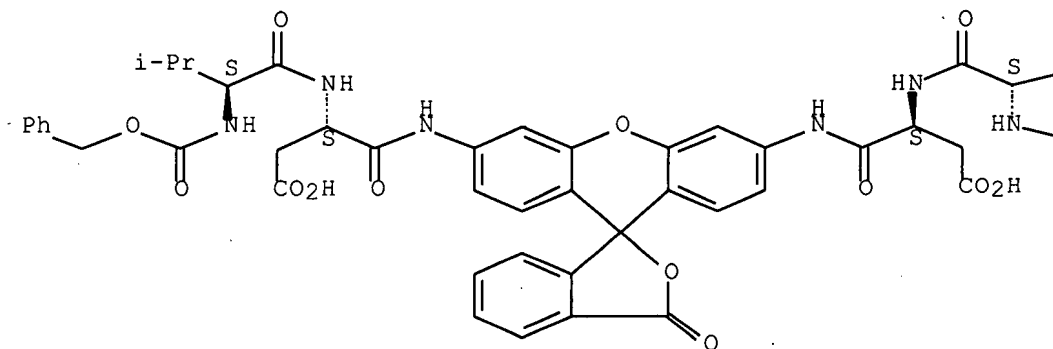


RN 223539-54-6 USPATFULL

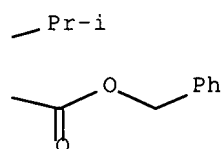
CN L- $\alpha$ -Asparagine, 2,2'-[(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)diimino]bis[N-[(phenylmethoxy)carbonyl]-L-valyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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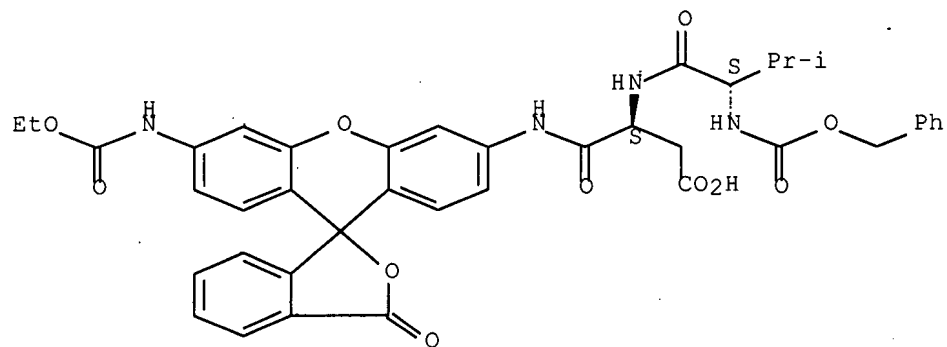
PAGE 1-B



RN 223539-65-9 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H), 9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

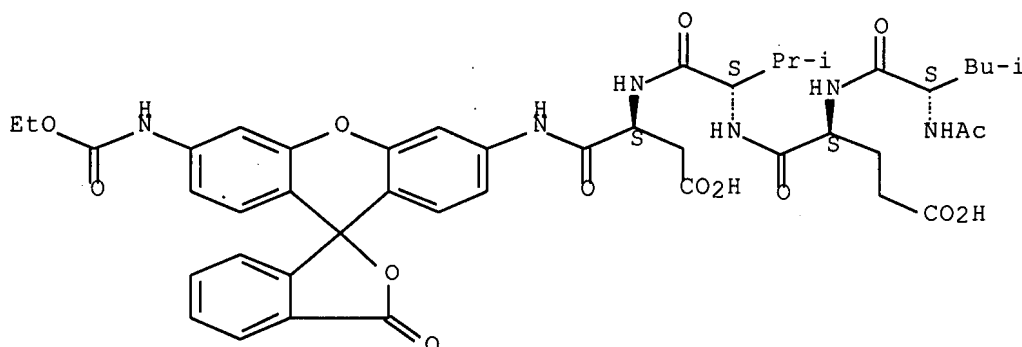
Absolute stereochemistry.



RN 223539-78-4 USPATFULL

CN L- $\alpha$ -Asparagine, N-acetyl-L-leucyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H), 9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L41 ANSWER 18 OF 20 USPATFULL on STN

ACCESSION NUMBER: 2002:262359 USPATFULL Full-text

TITLE: Gambogic acid, analogs and derivatives as activators of caspases and inducers of apoptosis

INVENTOR(S): Cai, Sui Xiong, San Diego, CA, United States

Zhang, Han-Zhong, San Diego, CA, United States

Wang, Yan, San Diego, CA, United States

Tseng, Ben, San Diego, CA, United States

Kasibhatla, Shailaja, San Diego, CA, United States

Drewe, John A., Costa Mesa, CA, United States

PATENT ASSIGNEE(S): Cytovia, Inc., San Diego, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6462041	B1	20021008
APPLICATION INFO.:	US 2000-495120		20000201 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-135424P	19990521 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Solola, T. A.	
LEGAL REPRESENTATIVE:	Sterne, Kessler, Goldstein & Fox P.L.L.C.	
NUMBER OF CLAIMS:	54	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	13 Drawing Figure(s); 6 Drawing Page(s)	
LINE COUNT:	2738	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed to gambogic acid, analogs and derivatives thereof, represented by the general Formulae I-III: ##STR1##

wherein R.sub.1-R.sub.5 are defined herein. The present invention also relates to the discovery that compounds having Formula I-III are activators of caspases and inducers of apoptosis. Therefore, the activators of caspases and inducers of apoptosis of this invention can be used to induce cell death in a variety of clinical conditions in which uncontrolled cell growth and spread of abnormal cells occurs.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L41 ANSWER 19 OF 20 USPATFULL on STN

ACCESSION NUMBER: 2002:19420 USPATFULL Full-text

TITLE: Fluorogenic or fluorescent reporter molecules and their applications for whole-cell fluorescence screening assays for capsases and other enzymes and the use thereof

INVENTOR(S): **Weber, Eckard**, San Diego, CA, United States  
**Cai, Sui Xiong**, San Diego, CA, United States  
**Keana, John F. W.**, Eugene, OR, United States  
**Drewe, John A.**, Costa Mesa, CA, United States  
**Zhang, Han-Zhong**, Irvine, CA, United States

PATENT ASSIGNEE(S): Cytovia, Inc., San Diego, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6342611	B1	20020129
APPLICATION INFO.:	US 1998-168888		19981009 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-61582P	19971010 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Ceperley, Mary E.	
LEGAL REPRESENTATIVE:	Sterne, Kessler, Goldstein & Fox P.L.L.C.	
NUMBER OF CLAIMS:	41	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	28 Drawing Figure(s); 12 Drawing Page(s)	
LINE COUNT:	4372	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel fluorescent dyes, novel fluorogenic and fluorescent reporter molecules and new enzyme assay processes that can be used to detect the activity of caspases and other enzymes involved in apoptosis in whole cells, cell lines and tissue samples derived from any living organism or organ. The reporter molecules and assay processes can be used in drug screening procedures to identify compounds which act as inhibitors or inducers of the caspase cascade in whole cells or tissues. The reagents and assays described herein are also useful for determining the chemosensitivity of human cancer cells to treatment with chemotherapeutic drugs. The present invention also relates to novel fluorogenic and fluorescent reporter molecules and new enzyme assay processes that can be used to detect the activity of type 2 methionine aminopeptidase, dipeptidyl peptidase IV, calpain, aminopeptidase, HIV protease, adenovirus protease, HSV-1 protease, HCMV protease and HCV protease.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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 223538-41-8DP, N-blocked 223538-42-9DP, N-blocked  
 223538-43-0DP, N-blocked 223538-44-1DP, N-blocked  
 223538-45-2DP, N-blocked 223538-46-3DP, N-blocked  
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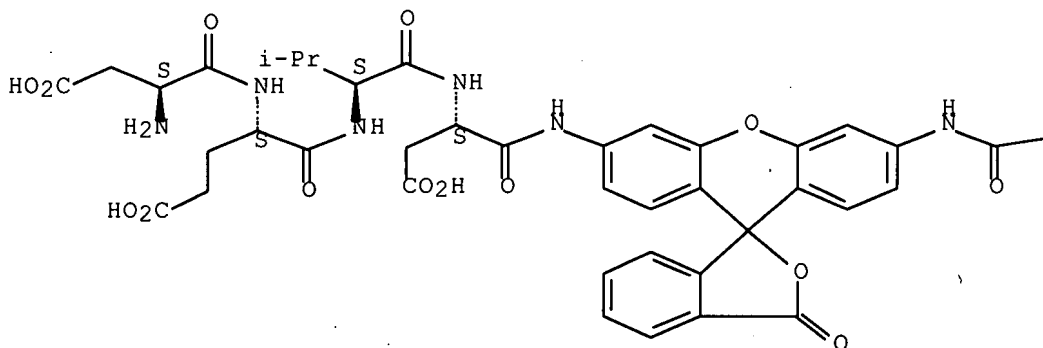
(novel **fluorescent** reporter mols. and their applications  
 including assays for caspases)

RN 220846-75-3 USPTFULL

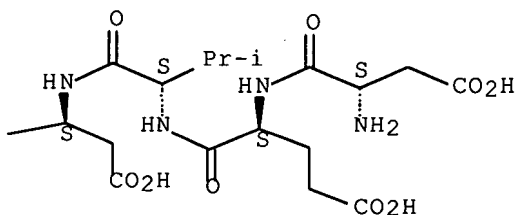
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 [9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-  
 valyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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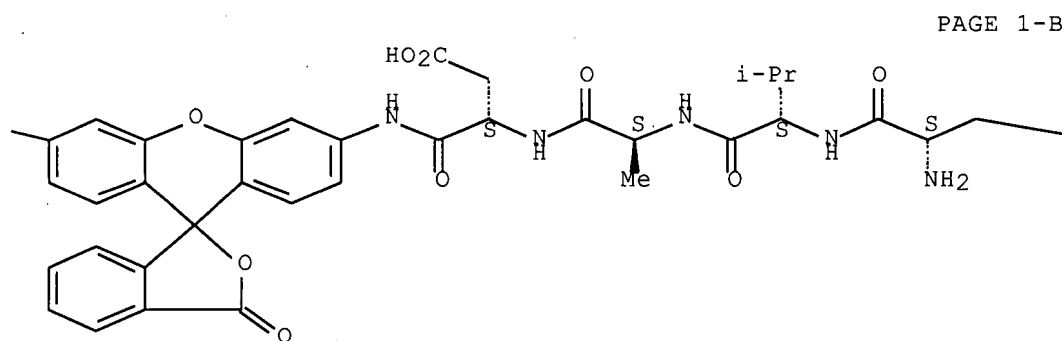
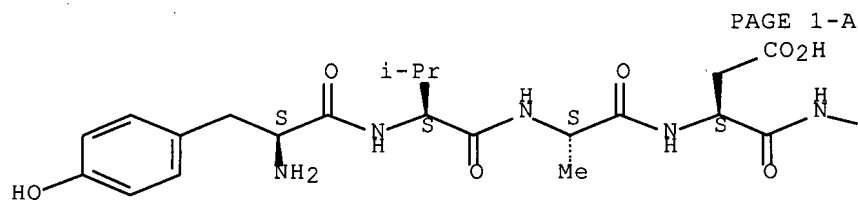


RN 220846-80-0 USPTFULL

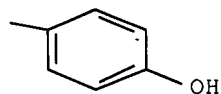
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 INDEX NAME)

Absolute stereochemistry.





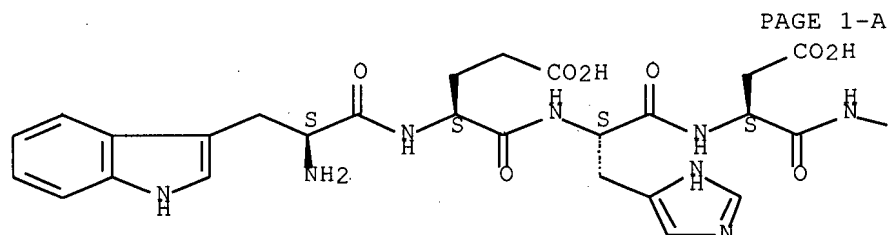
PAGE 1-C



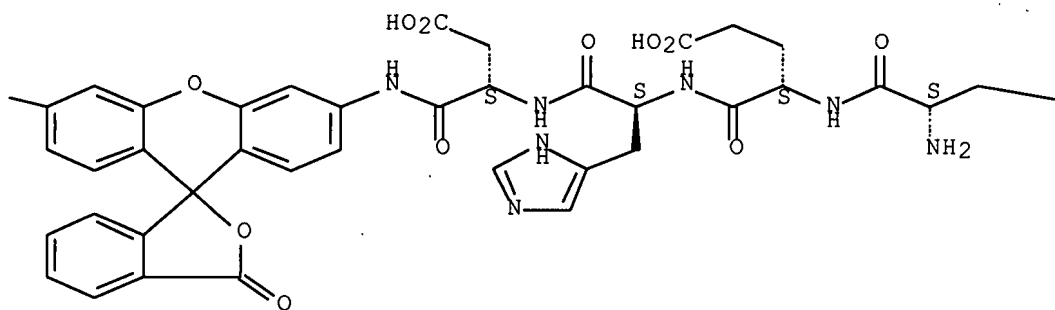
RN 223538-39-4 USPATFULL

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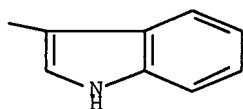
Absolute stereochemistry.



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PAGE 1-C

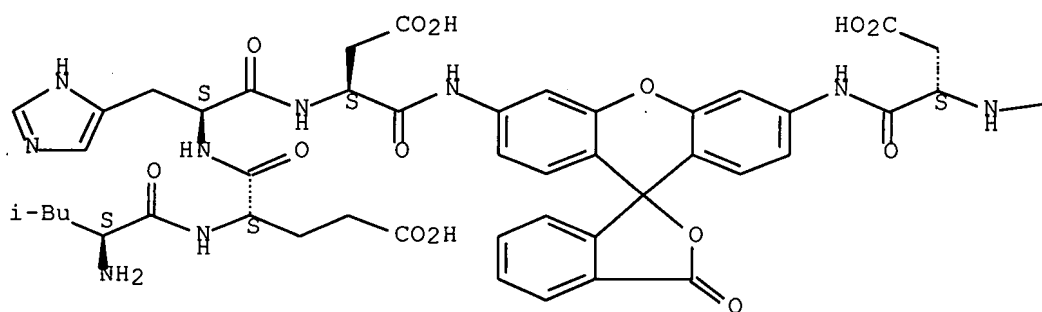


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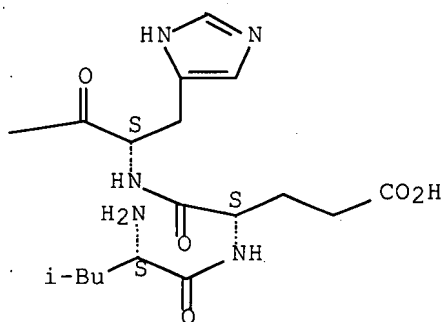
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L-leucyl-L- $\alpha$ -glutamyl-L-histidyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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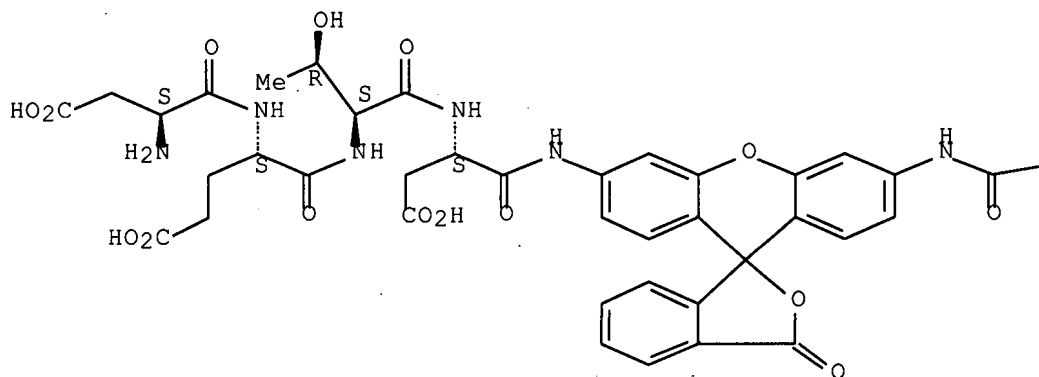


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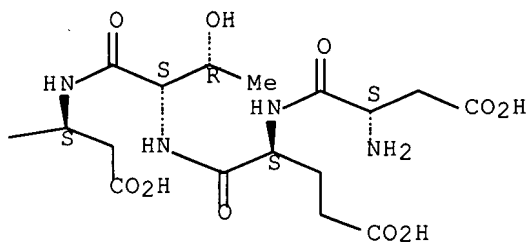
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-threonyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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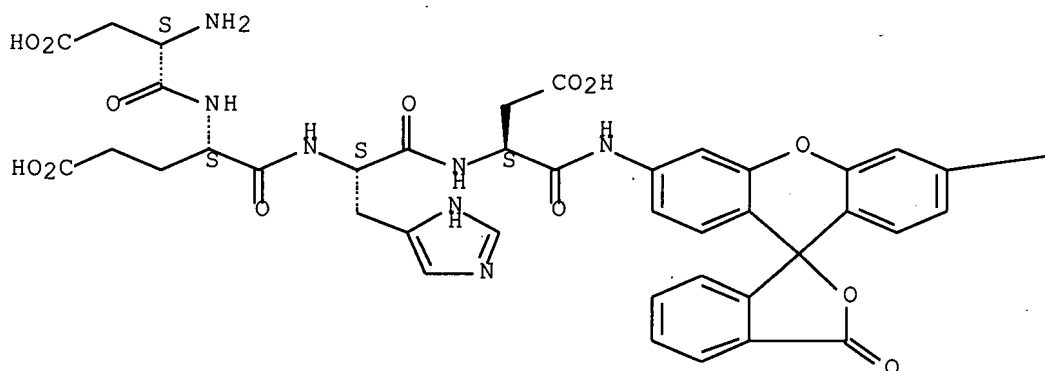
RN 223538-42-9 USPATFULL

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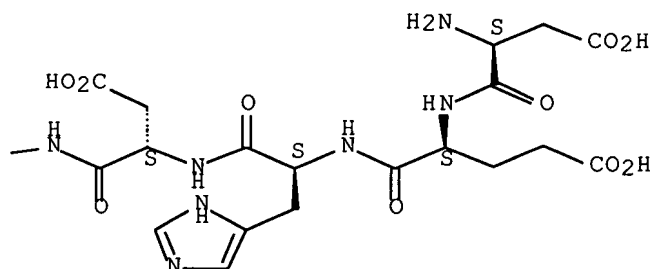
histidyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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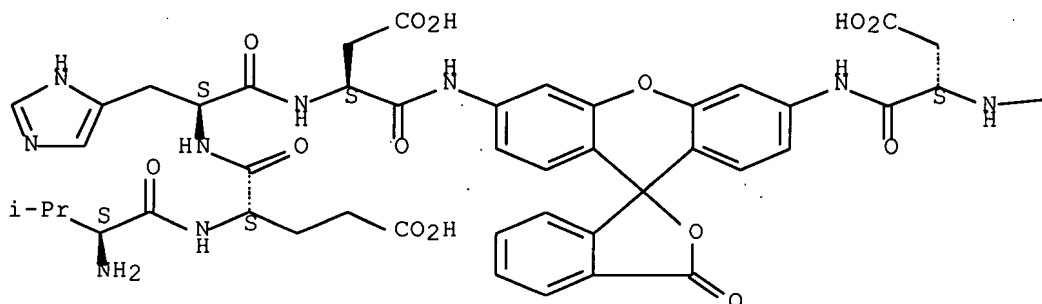


RN 223538-43-0 USPATFULL

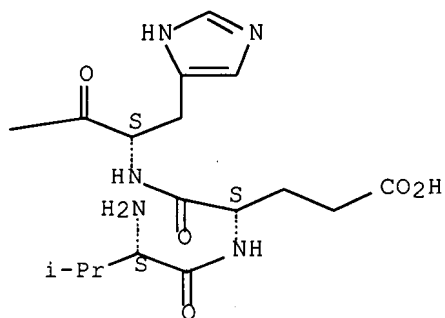
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-valyl-L- $\alpha$ -glutamyl-L-histidyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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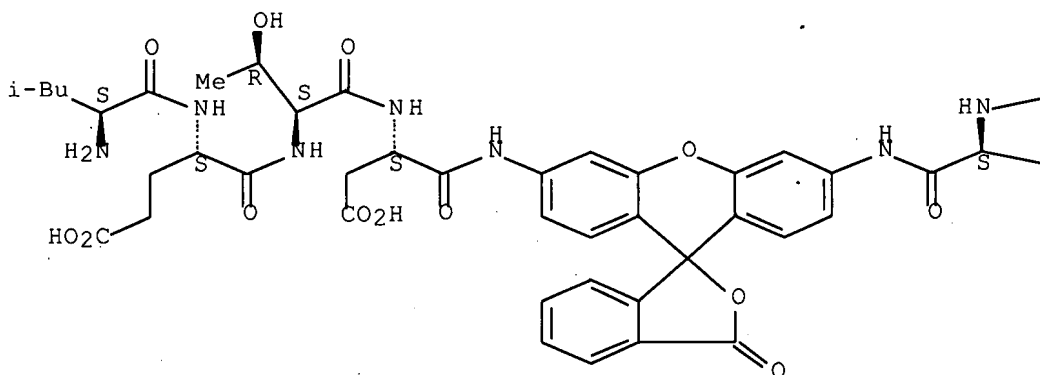


RN 223538-44-1 USPATFULL

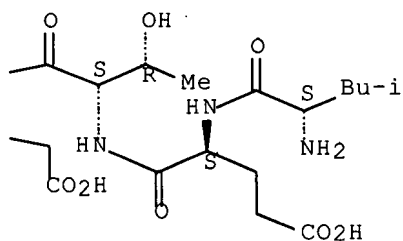
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(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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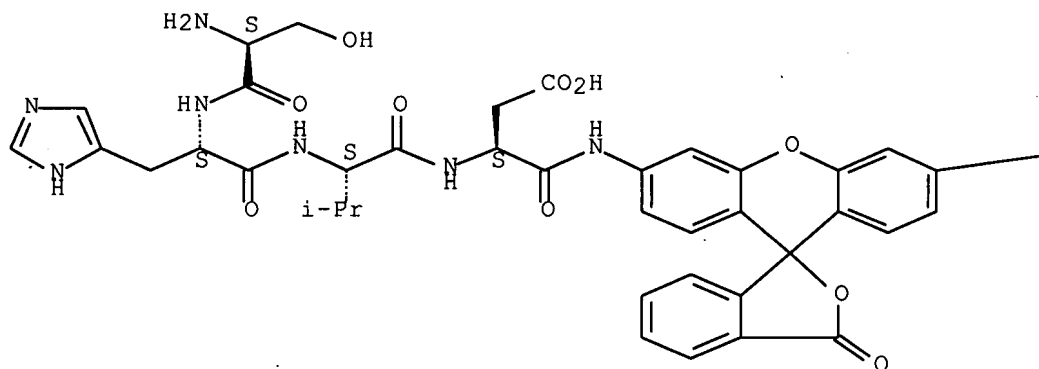


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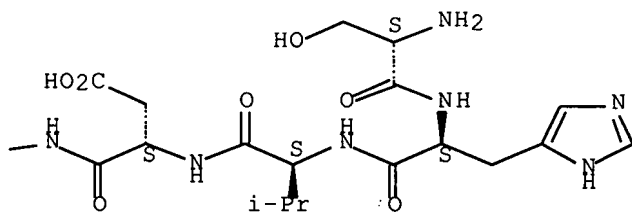
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
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INDEX NAME)

Absolute stereochemistry.

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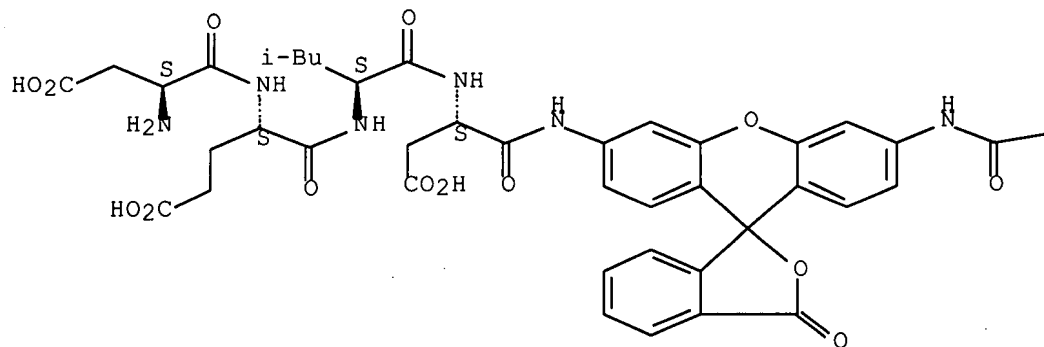


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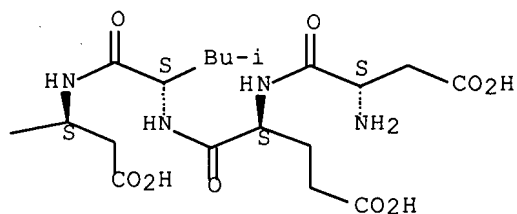
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-  
leucyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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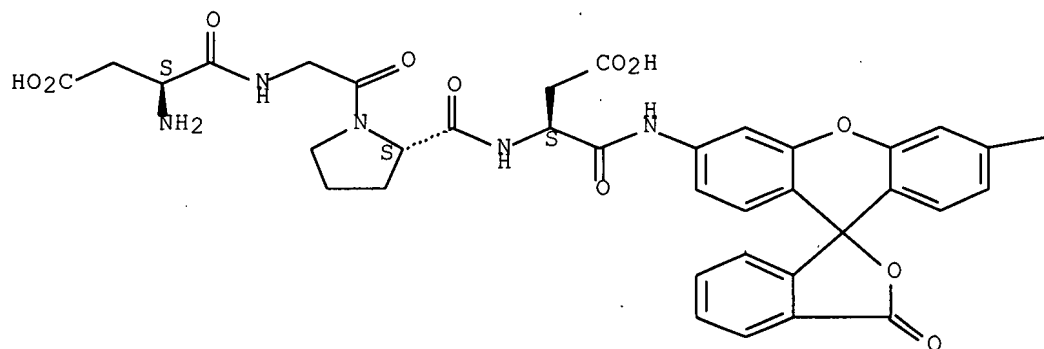


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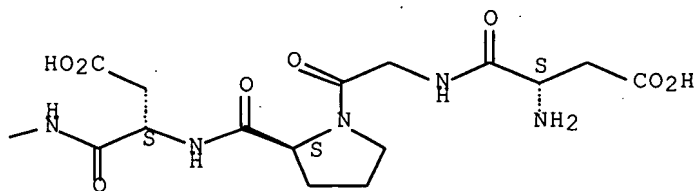
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartylglycyl-L-prolyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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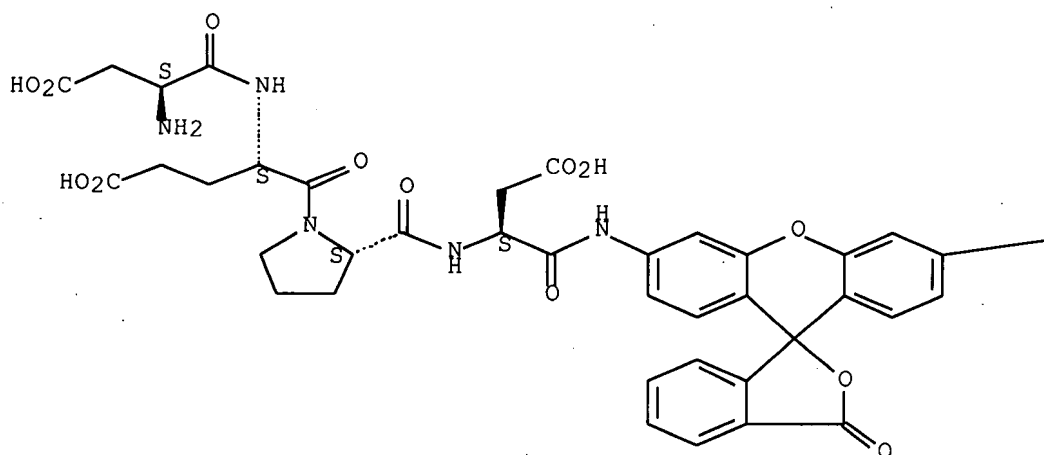


RN 223538-48-5 USPATFULL

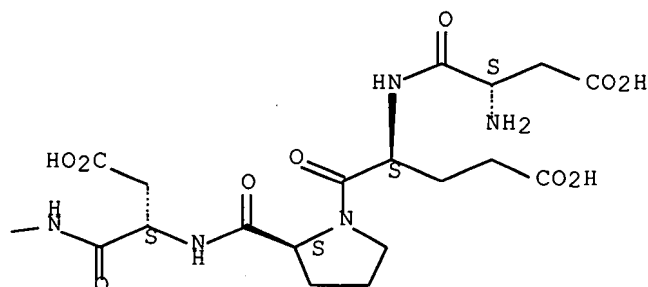
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-prolyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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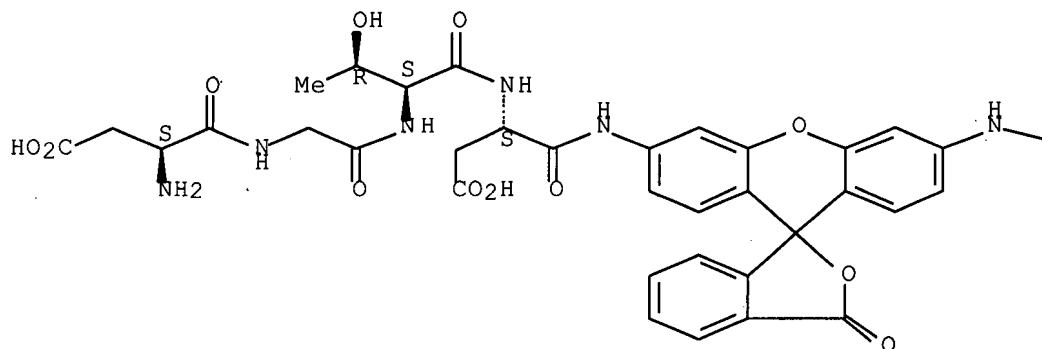
RN 223538-49-6 USPATFULL

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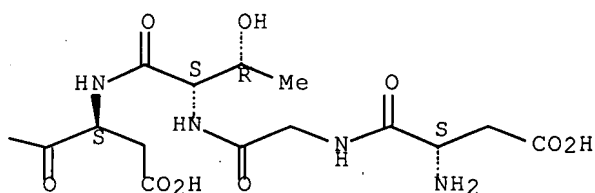


Absolute stereochemistry.

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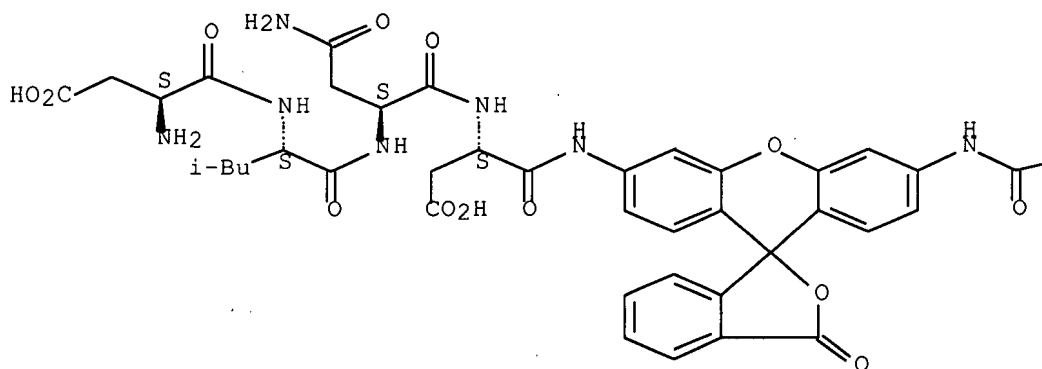


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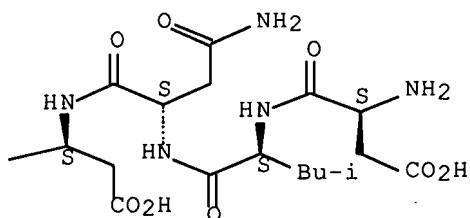
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L-leucyl-L-asparaginy]-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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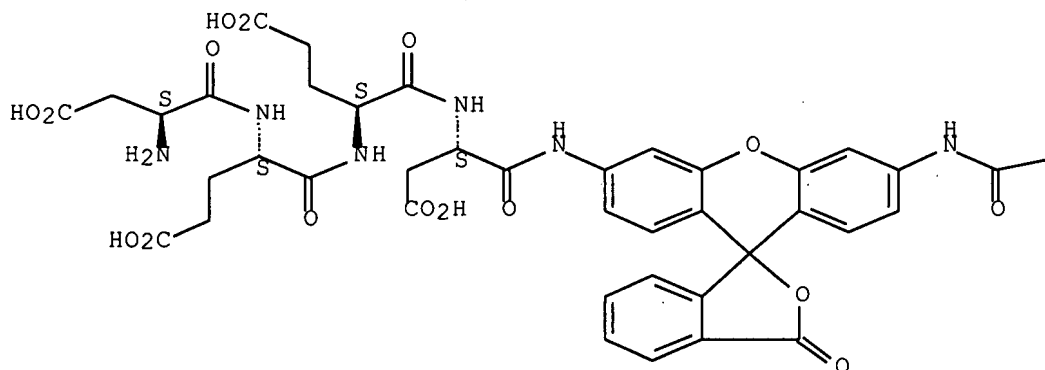


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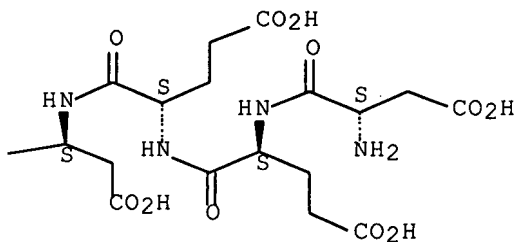
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-α-aspartyl-L-α-glutamyl-L-  
α-glutamyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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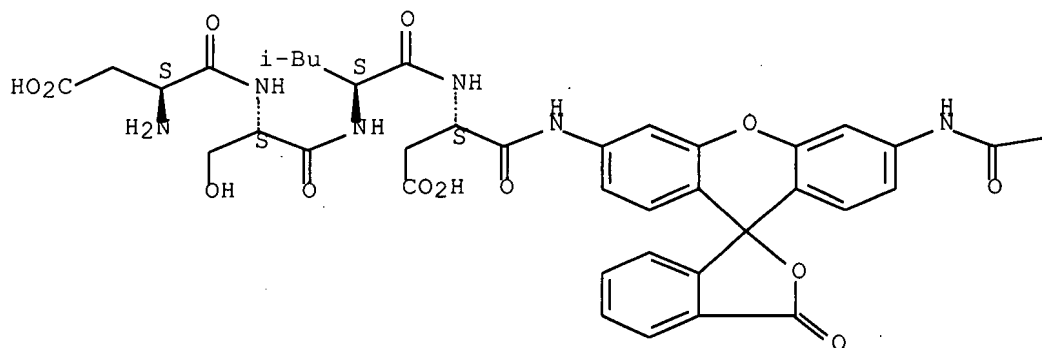


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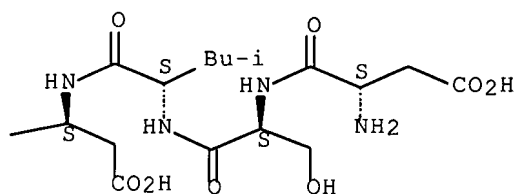
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(CA INDEX NAME)

Absolute stereochemistry.

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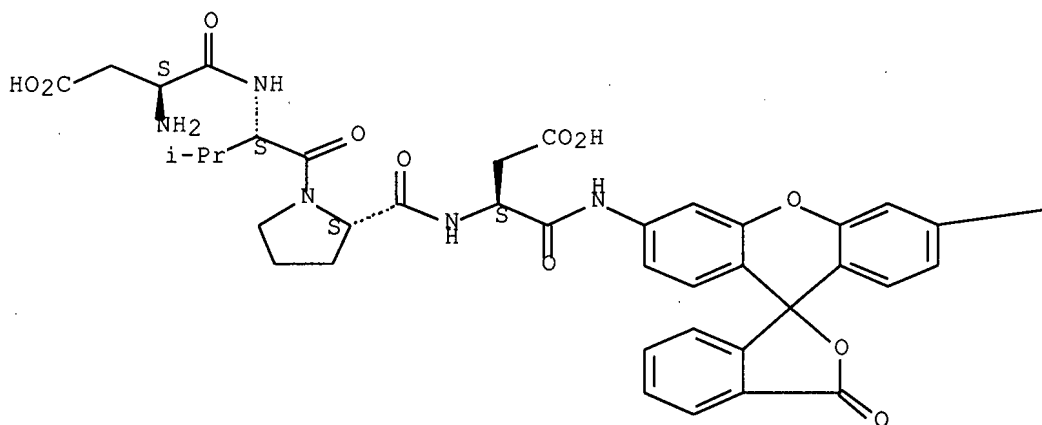


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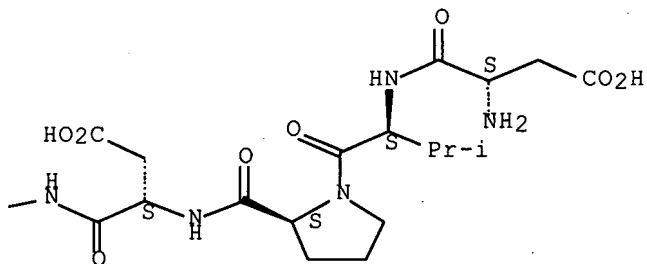
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
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(CA INDEX NAME)

Absolute stereochemistry.

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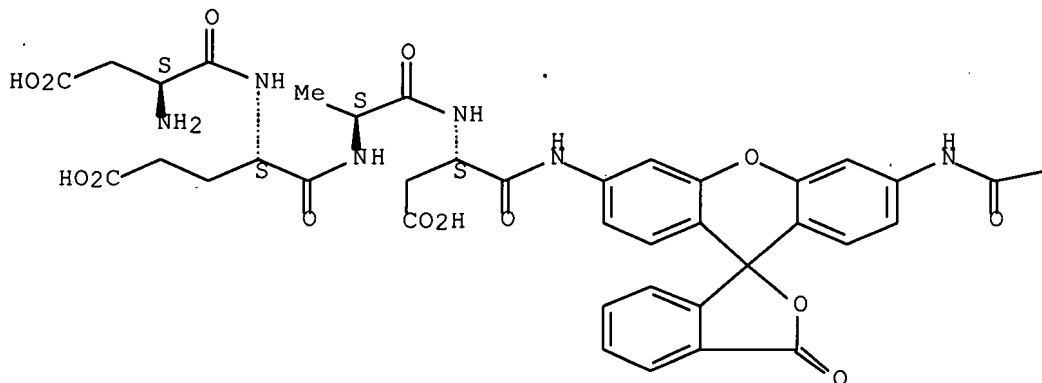


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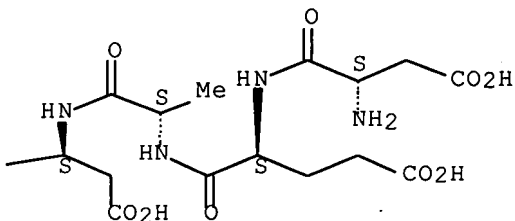
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
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alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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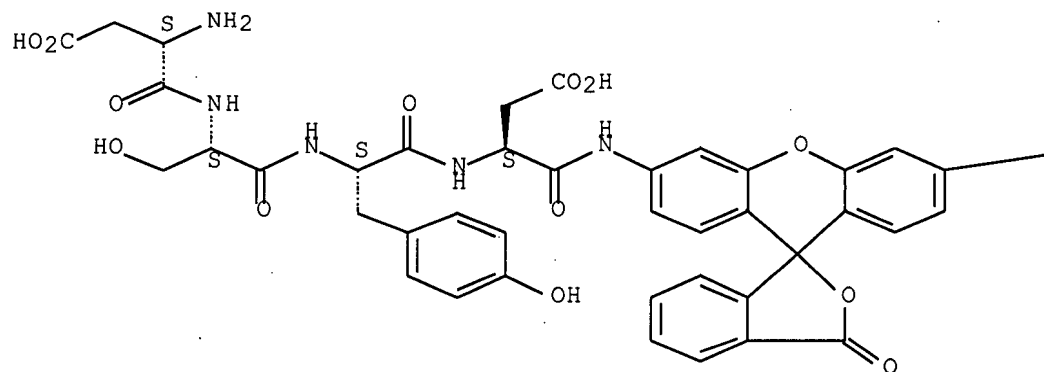


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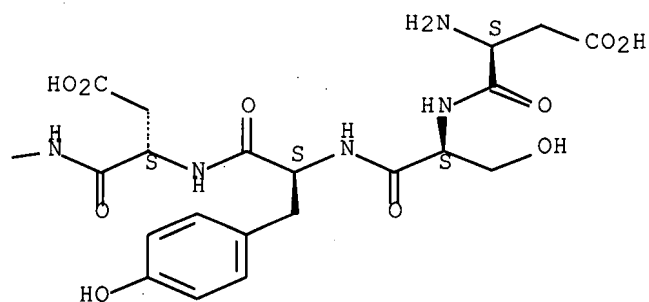
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(CA INDEX NAME)

Absolute stereochemistry.

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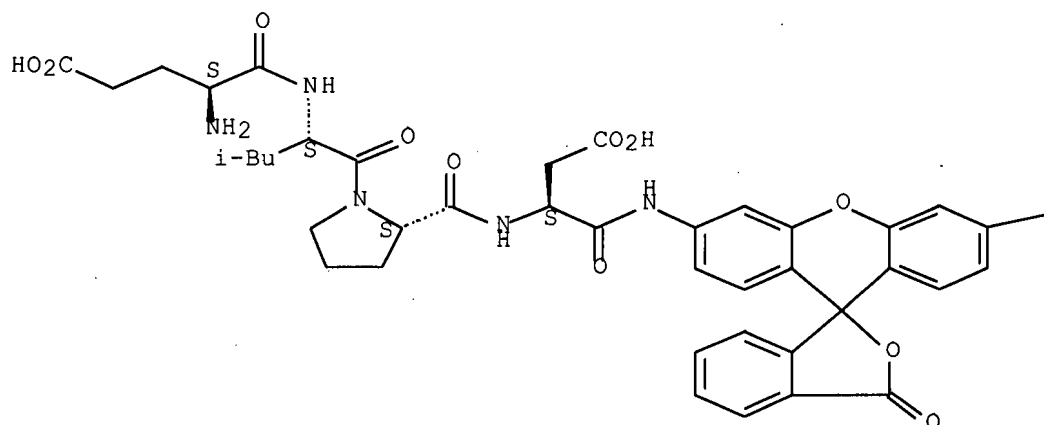


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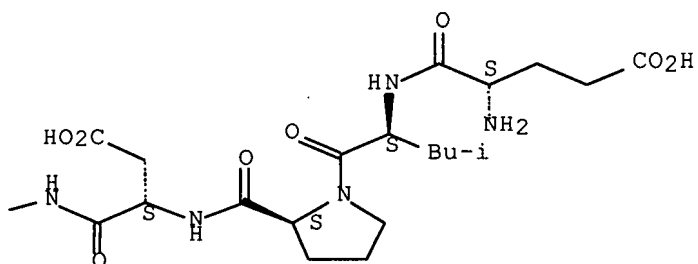
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L- $\alpha$ -glutamyl-L-leucyl-L-prolyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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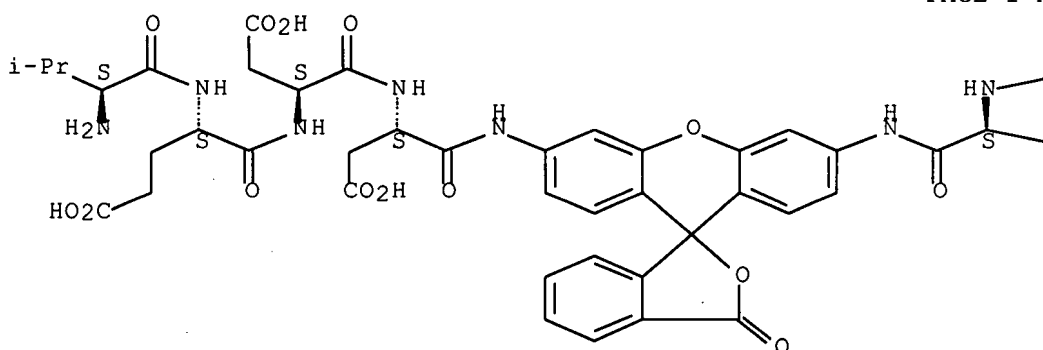


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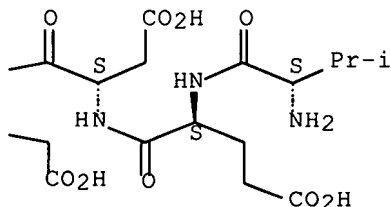
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-valyl-L-α-glutamyl-L-α-aspartyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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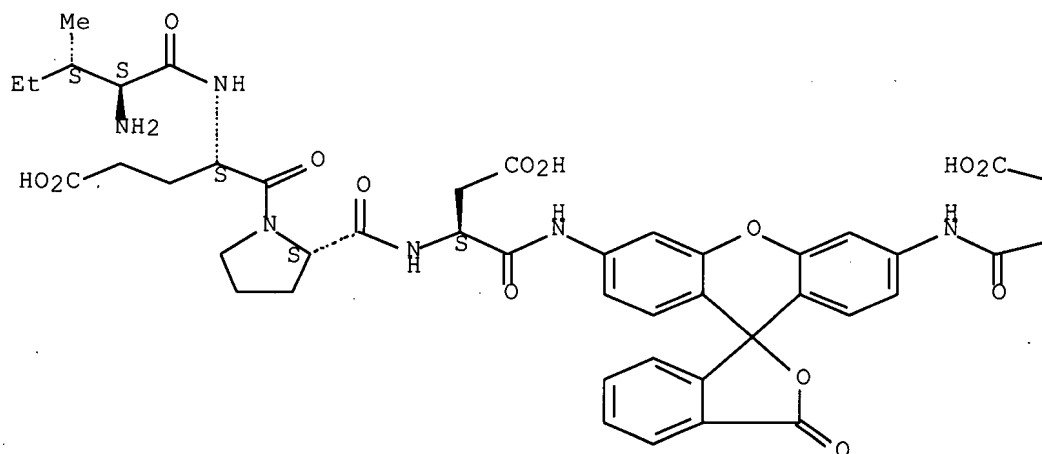


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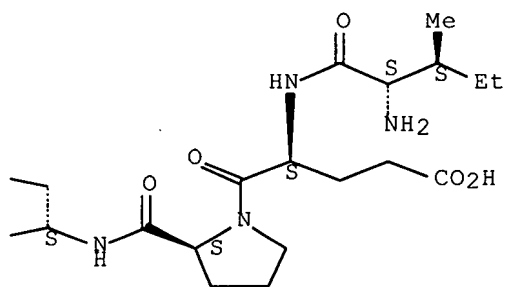
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-isoleucyl-L-α-glutamyl-L-prolyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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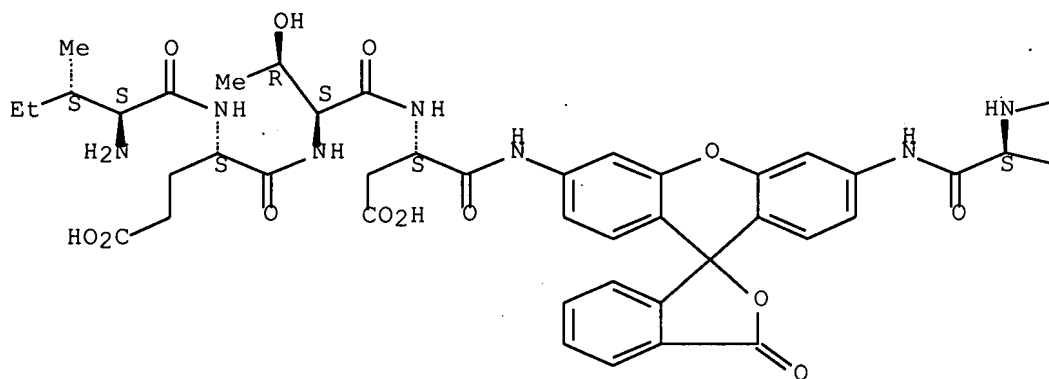


RN. 223538-59-8 USPATFULL

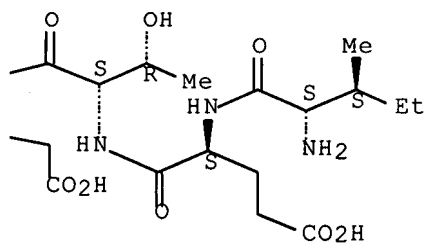
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L-isoleucyl-L-α-glutamyl-L-threonyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

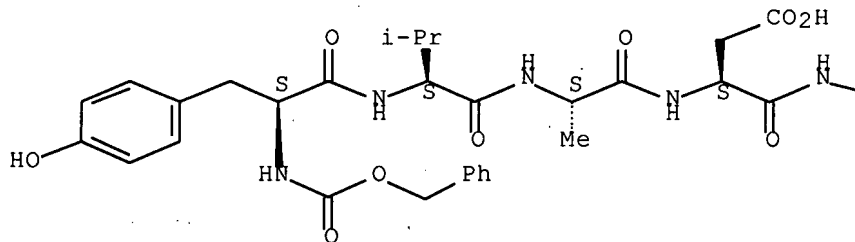


RN 223538-60-1 USPATFULL

CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[N-[(phenylmethoxy)carbonyl]-L-tyrosyl-L-valyl-L-alanyl- (9CI) (CA INDEX NAME)

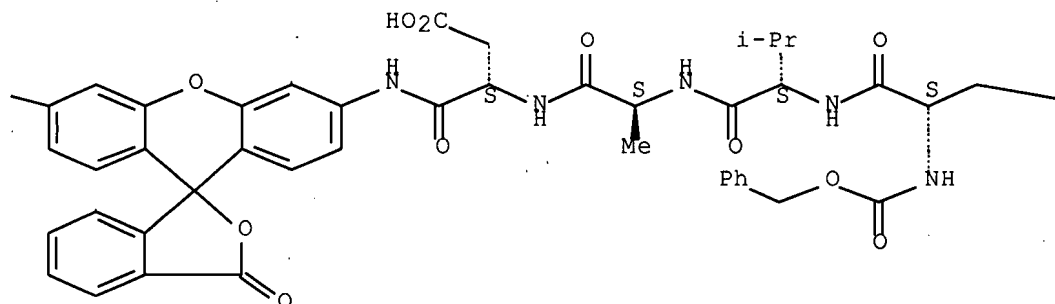
Absolute stereochemistry.

PAGE 1-A

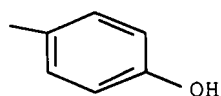




PAGE 1-B



PAGE 1-C

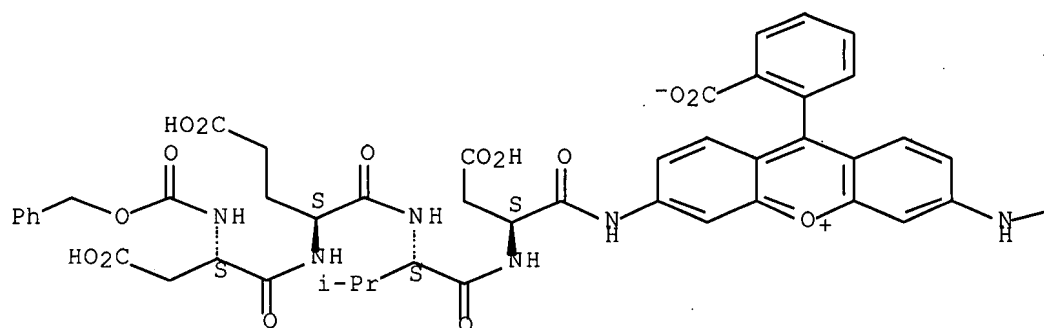


RN 223538-61-2 USPATFULL

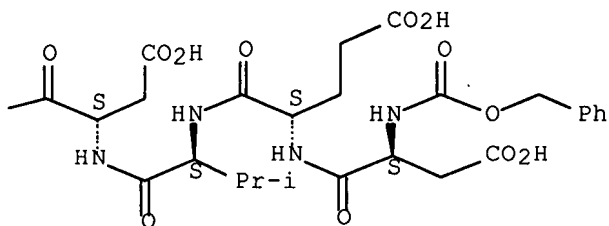
CN L- $\alpha$ -Asparagine, 4,4'-[9-(2-carboxyphenyl)xanthylum-3,6-diyl]bis[N-  
[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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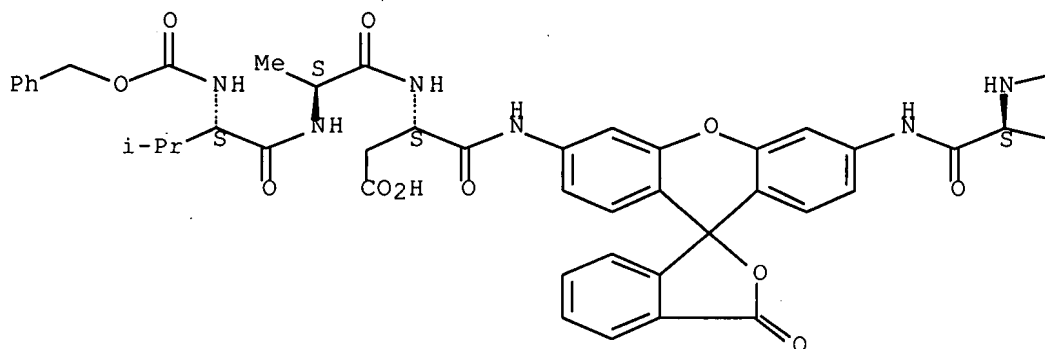


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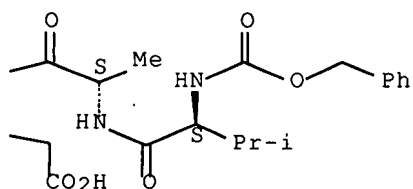
CN L-α-Asparagine, 3,3'-(3-oxospiro[isobenzofuran-1(3H),9'-(9H)xanthene]-3',6'-diyl)bis[N-[(phenylmethoxy)carbonyl]-L-valyl-L-alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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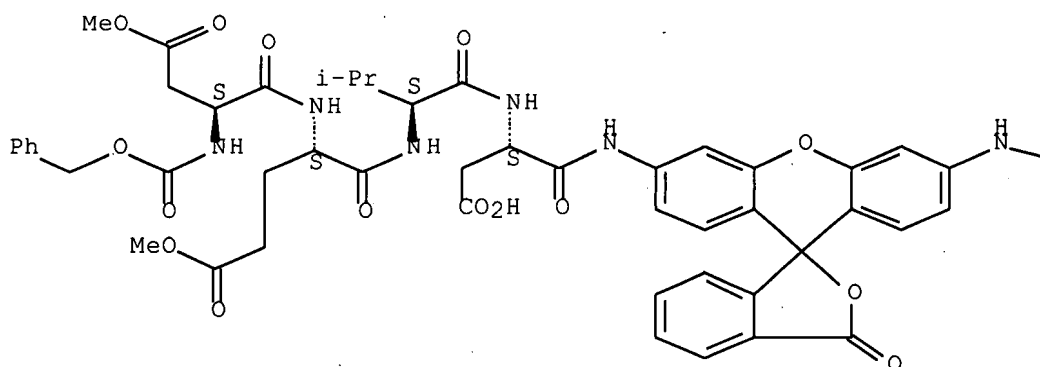


RN 223538-68-9 USPATFULL

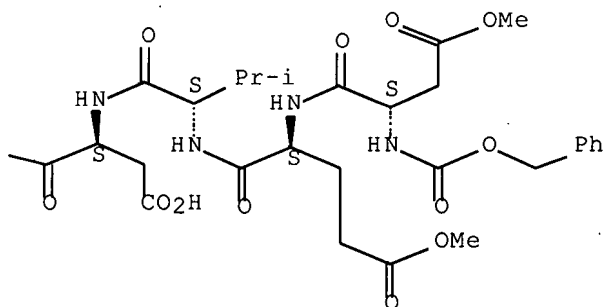
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-(9H)xanthene]-3',6'-diyl)bis[N-[(phenylmethoxy)carbonyl]-L-α-aspartyl-L-α-glutamyl-L-valyl-, 1,1',2,2'-tetramethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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PAGE 1-B

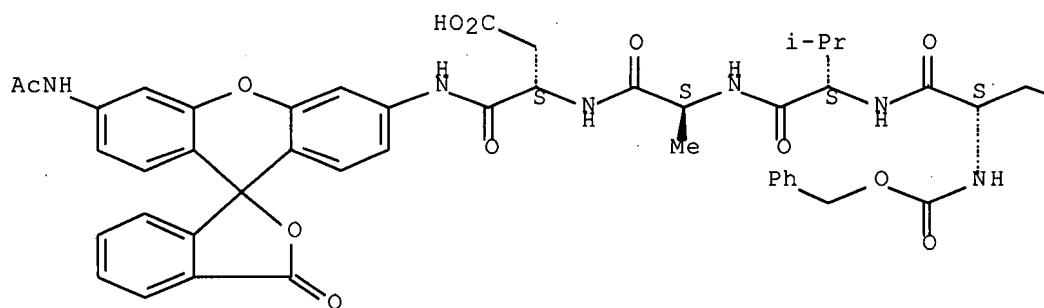


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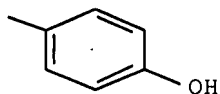
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-tyrosyl-L-valyl-L-alanyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H), 9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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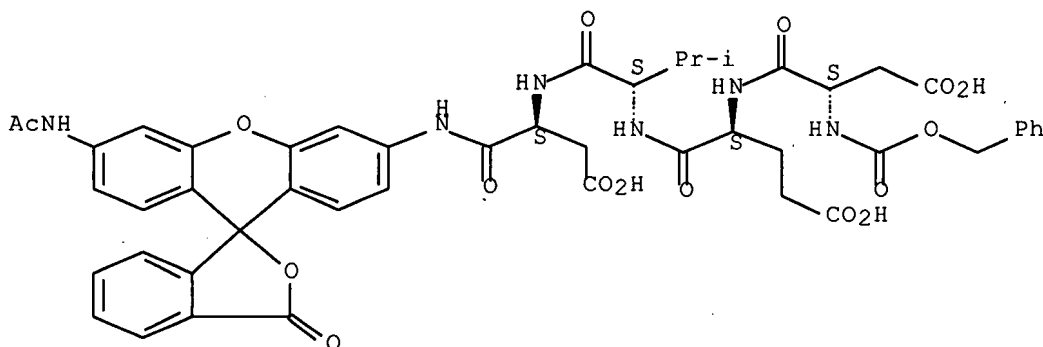
PAGE 1-B



RN 223538-73-6 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

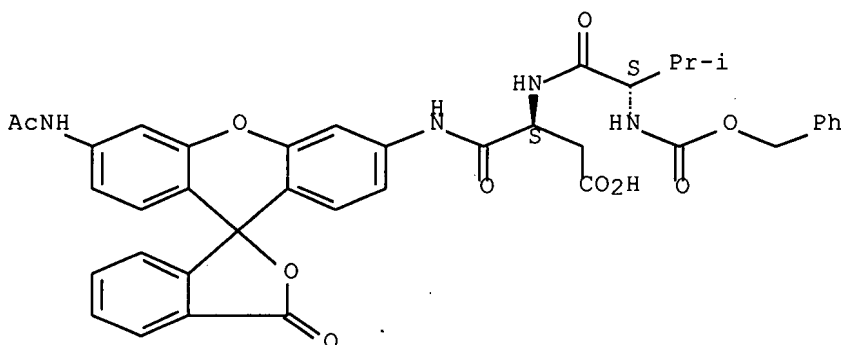
Absolute stereochemistry.



RN 223538-74-7 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

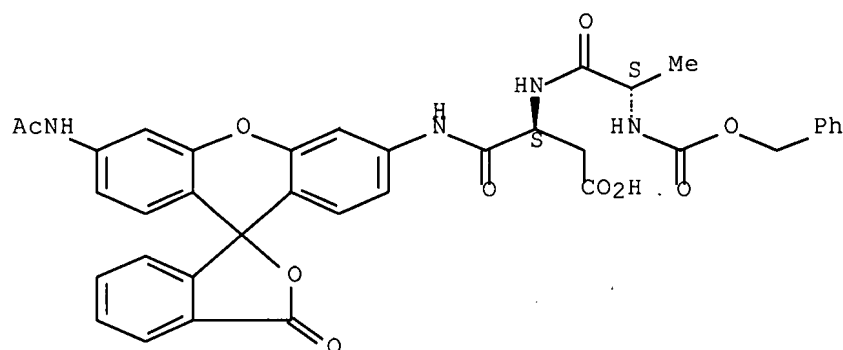
Absolute stereochemistry.



RN 223538-75-8 USPATFULL

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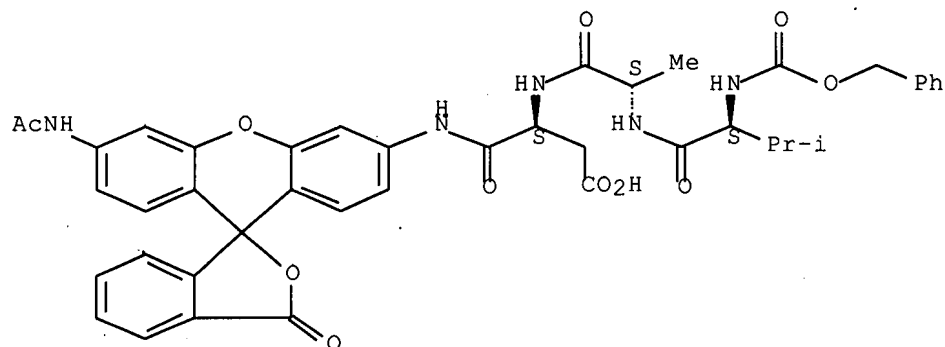
Absolute stereochemistry.



RN 223538-76-9 USPATFULL

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Absolute stereochemistry.

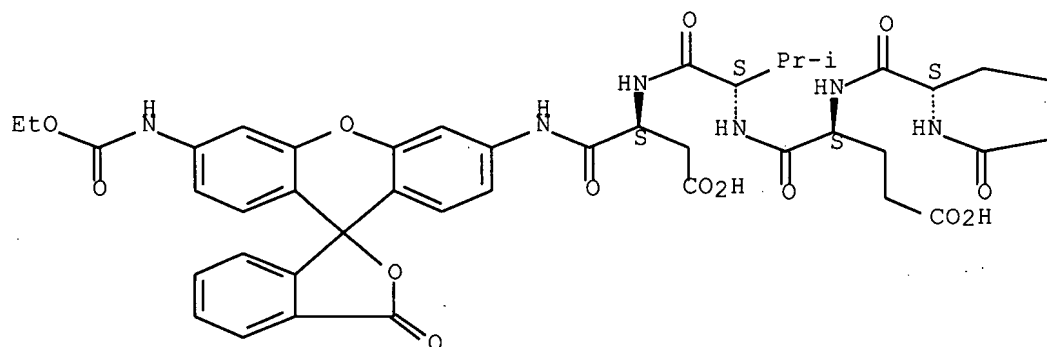


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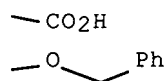
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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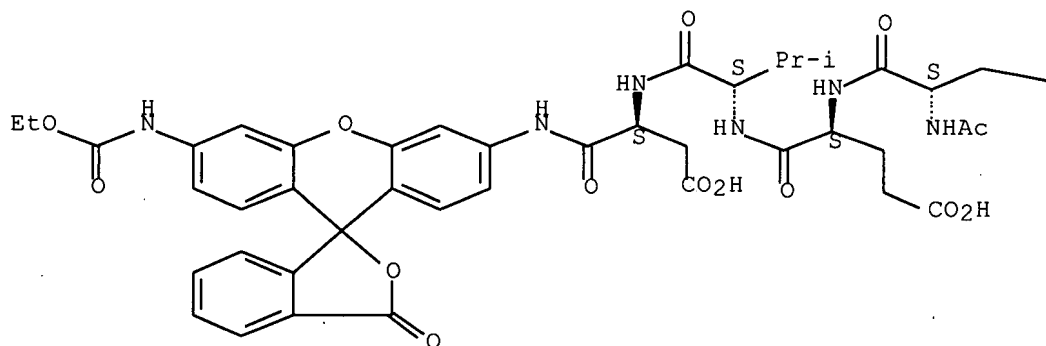


RN 223538-78-1 USPATFULL

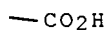
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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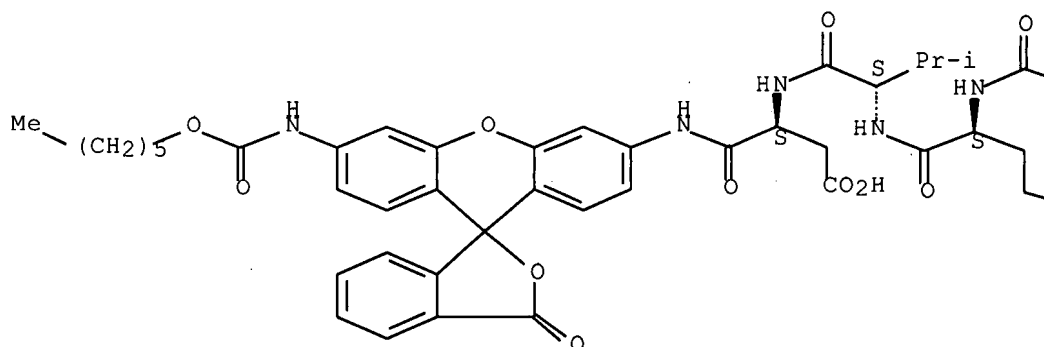


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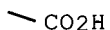
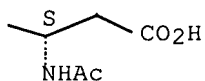
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[ (hexyloxy) carbonyl] amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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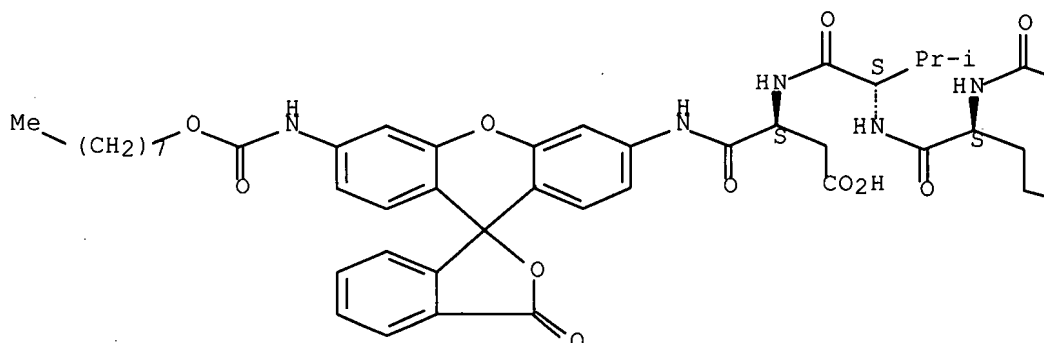


RN 223538-80-5 USPATFULL

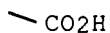
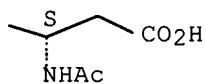
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Absolute stereochemistry.

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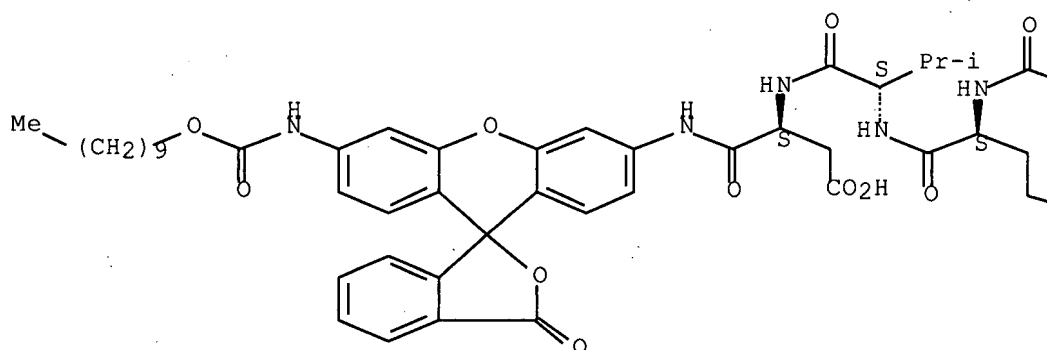


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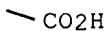
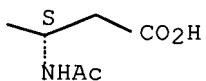
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[[(decyloxy)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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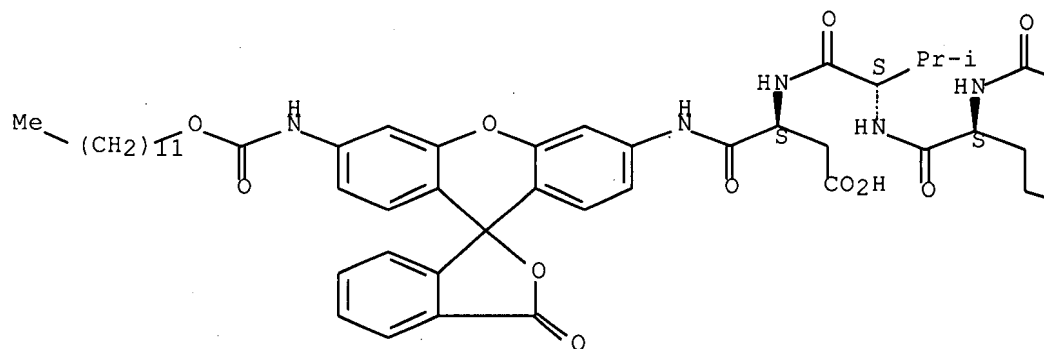
RN 223538-86-1 USPATFULL

CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[[(dodecyloxy)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

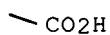
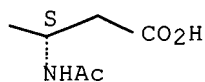
Absolute stereochemistry.



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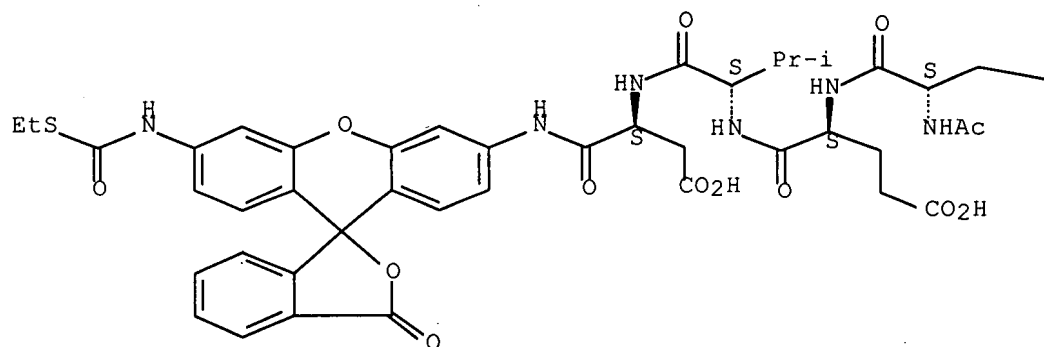


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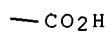
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Absolute stereochemistry.

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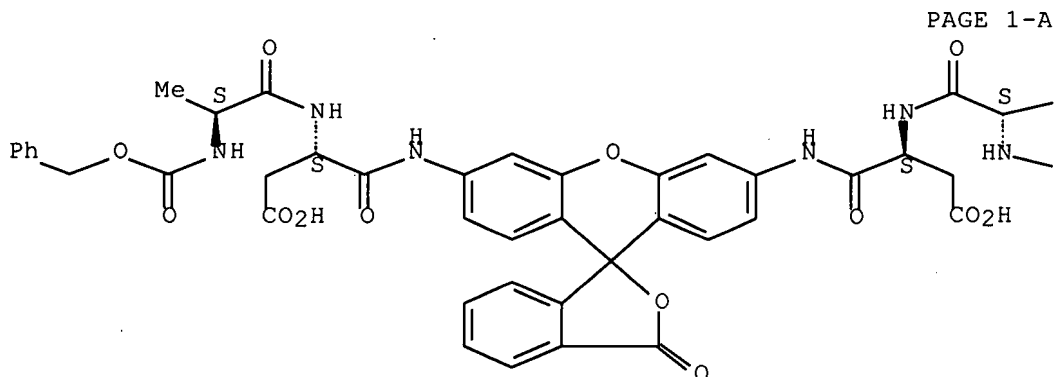
IT 223539-51-3P 223539-54-6P 223539-65-9P  
223539-78-4P

(novel **fluorescent** reporter mols. and their applications  
including assays for caspases)

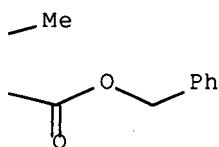
RN 223539-51-3 USPATFULL

CN L- $\alpha$ -Asparagine, 2,2'-[(3-oxospiro[isobenzofuran-1(3H),9'-  
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alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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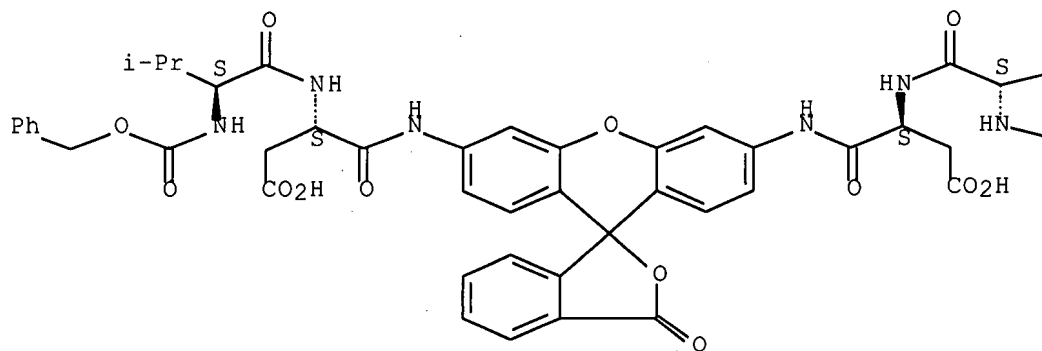


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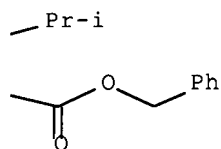
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(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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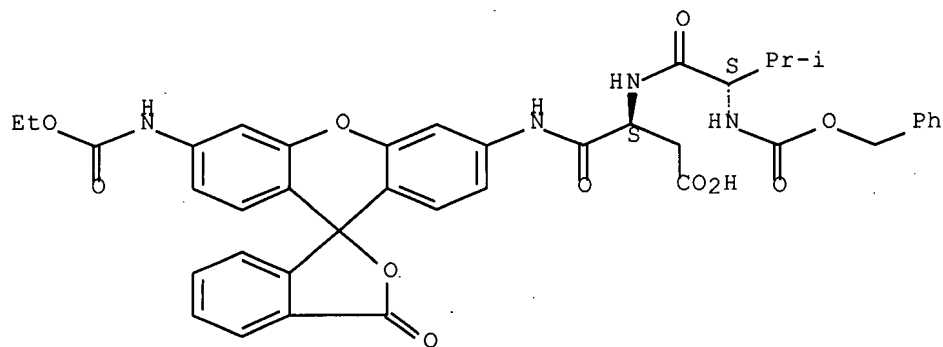
PAGE 1-B



RN 223539-65-9 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-N-[6'-  
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3'-yl]- (9CI) (CA INDEX NAME)

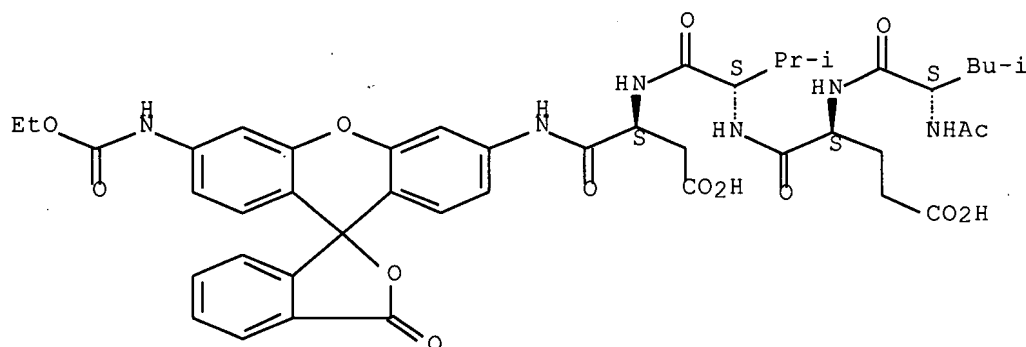
Absolute stereochemistry.



RN 223539-78-4 USPATFULL

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3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L41 ANSWER 20 OF 20 USPATFULL on STN

ACCESSION NUMBER: 2001:93669 USPATFULL Full-text

TITLE: Fluorescence dyes and their applications for whole-cell fluorescence screening assays for caspases, peptidases, proteases and other enzymes and the use thereof

INVENTOR(S): **Zhang, Han-Zhong**, San Diego, CA, United States

Cai, Sui Xiong, San Diego, CA, United States

PATENT ASSIGNEE(S): Cytovia, Inc., San Diego, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6248904	B1	20010619
APPLICATION INFO.:	US 1999-357952		19990721 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-93642P	19980721 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Rotman, Alan L.	
LEGAL REPRESENTATIVE:	Sterne, Kessler, Goldstein & Fox P.L.L.C.	
NUMBER OF CLAIMS:	10	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	11 Drawing Figure(s); 9 Drawing Page(s)	
LINE COUNT:	2970	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel fluorescent dyes, novel fluorogenic and fluorescent reporter molecules and new enzyme assay processes that can be used to detect the activity of caspases and other enzymes involved in apoptosis in whole cells, cell lines and tissue samples derived from any living organism or organ. The reporter molecules and assay processes can be used in drug screening procedures to identify compounds which act as inhibitors or inducers of the caspase cascade in whole cells or tissues. The reagents and assays described herein are also useful for determining the chemosensitivity of human cancer cells to treatment with chemotherapeutic drugs. The present invention also relates to novel fluorogenic and fluorescent reporter molecules and new enzyme assay processes that can be used to detect the activity of type 2 methionine aminopeptidase, HIV protease, adenovirus protease, HSV-1 protease, HCMV protease and HCV protease.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

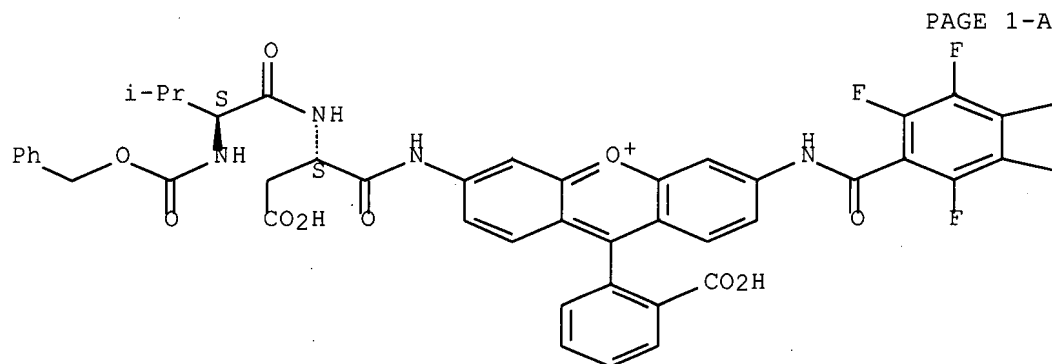
IT 256527-30-7P

(fluorescence dyes and their applications for whole cell  
fluorescence screening assays for caspases,  
peptidases, proteases and other enzymes)

RN 256527-30-7 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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— F

— F

IT 256527-07-8P 256527-09-0P 256527-11-4P  
256527-13-6P 256527-14-7P 256527-15-8P  
256527-16-9P 256527-17-0P 256527-19-2P  
256527-21-6P 256527-24-9P 256527-26-1P  
256527-29-4P 256527-31-8P 256527-32-9P  
256527-35-2P 256527-36-3P 256527-38-5P  
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256527-42-1P 256527-43-2P 256527-44-3P  
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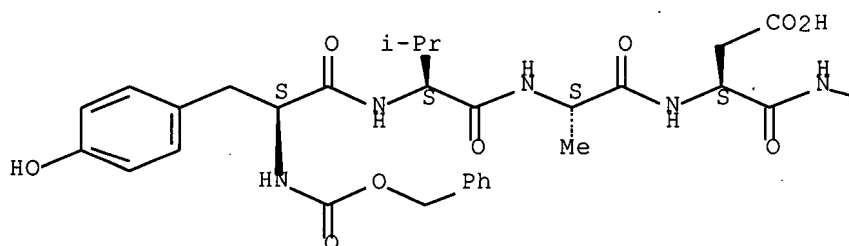
(fluorescence dyes and their applications for whole cell  
fluorescence screening assays for caspases,  
peptidases, proteases and other enzymes)

RN 256527-07-8 USPATFULL

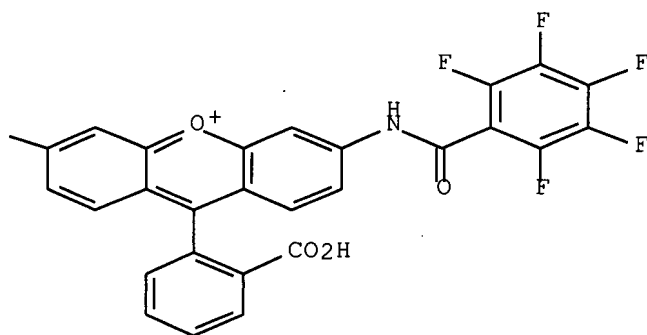
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-tyrosyl-L-valyl-L-alanyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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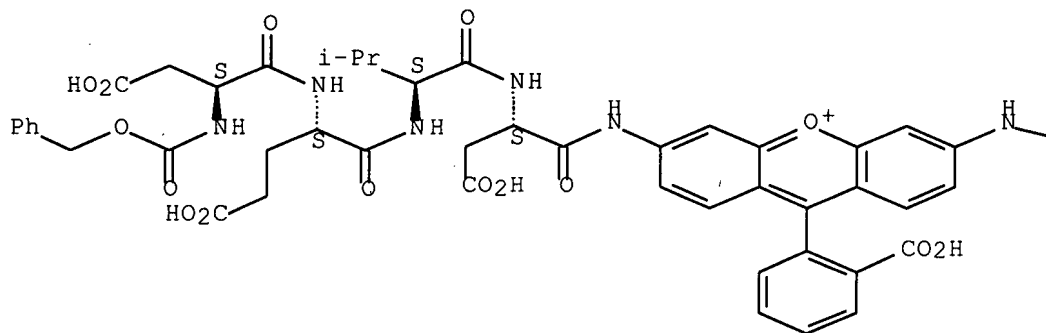


RN 256527-09-0 USPATFULL

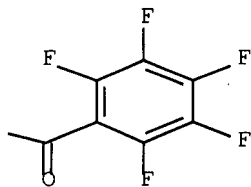
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Absolute stereochemistry.

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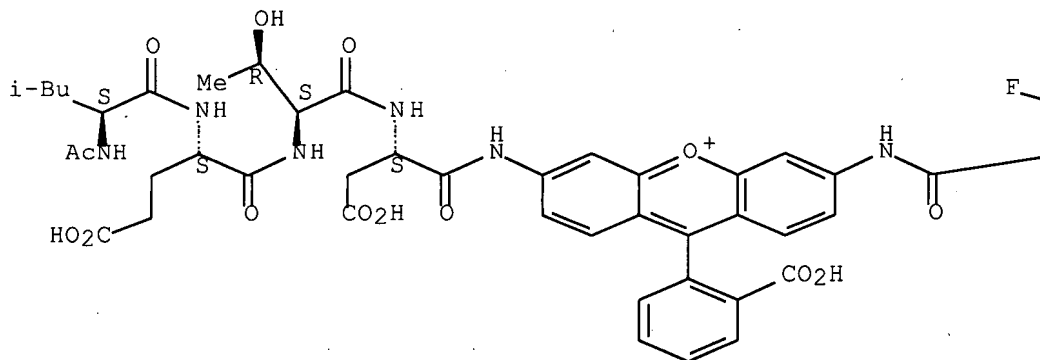


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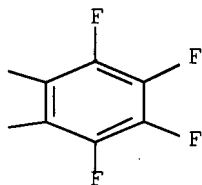
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(CA INDEX NAME)

Absolute stereochemistry.

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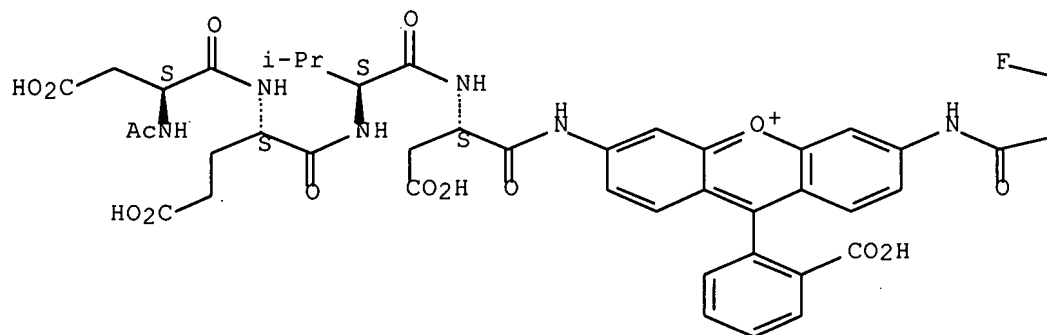


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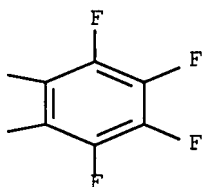
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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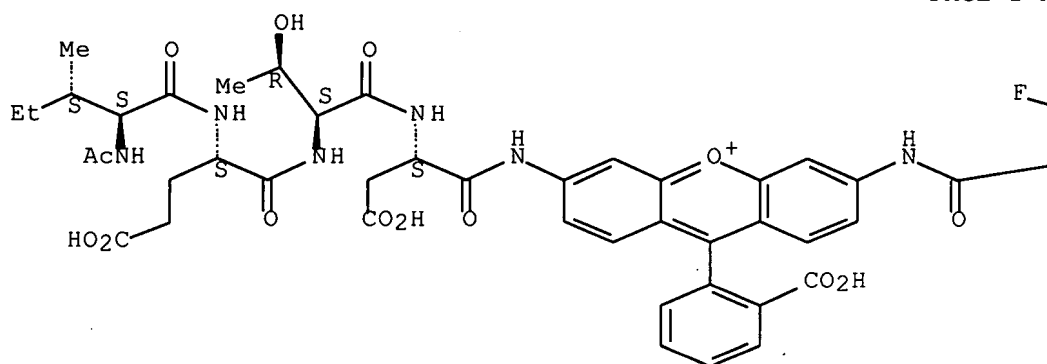


RN 256527-14-7 USPATFULL

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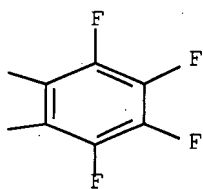
Absolute stereochemistry.

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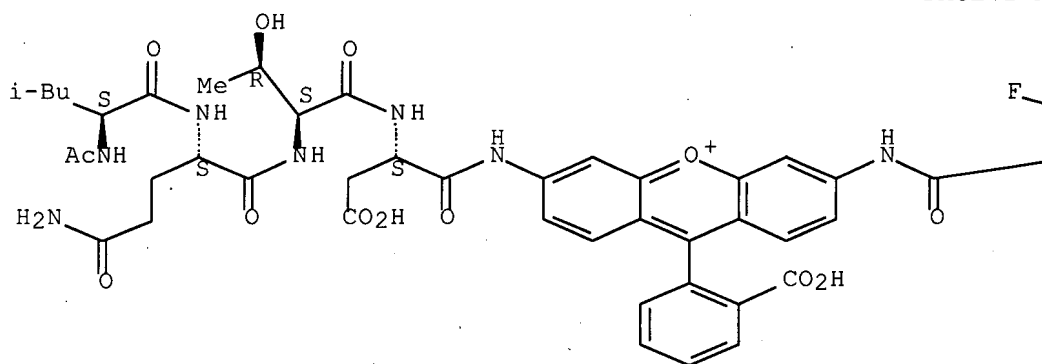


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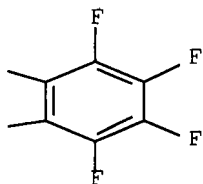
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Absolute stereochemistry.

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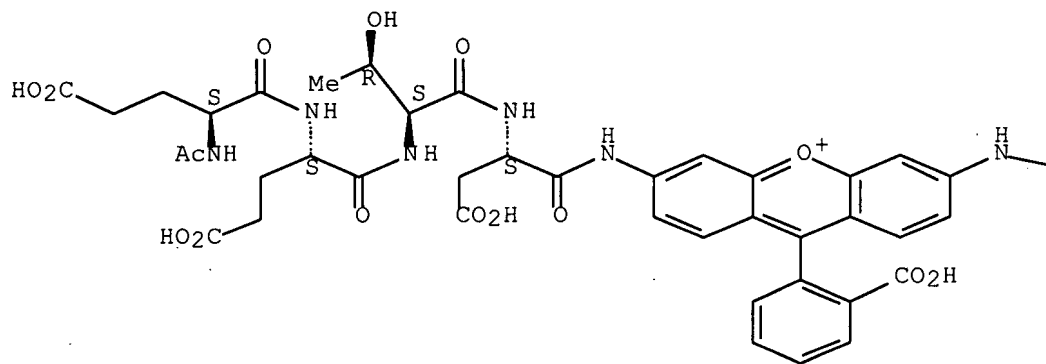


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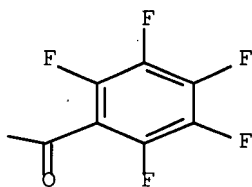
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Absolute stereochemistry.

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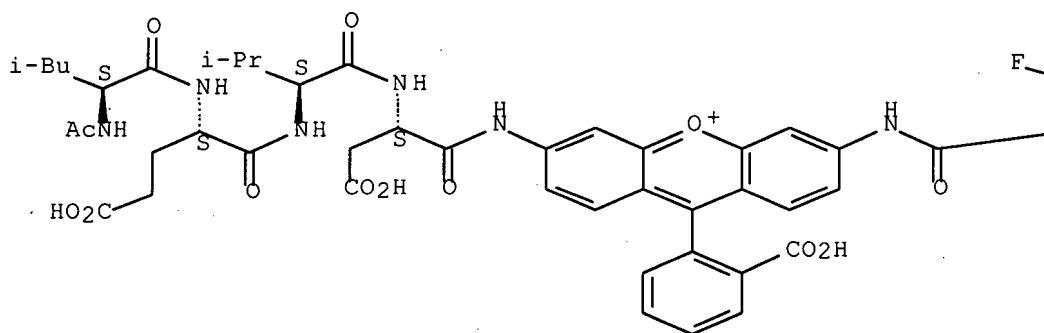


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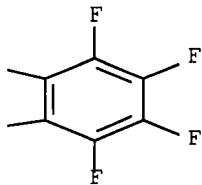
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Absolute stereochemistry..

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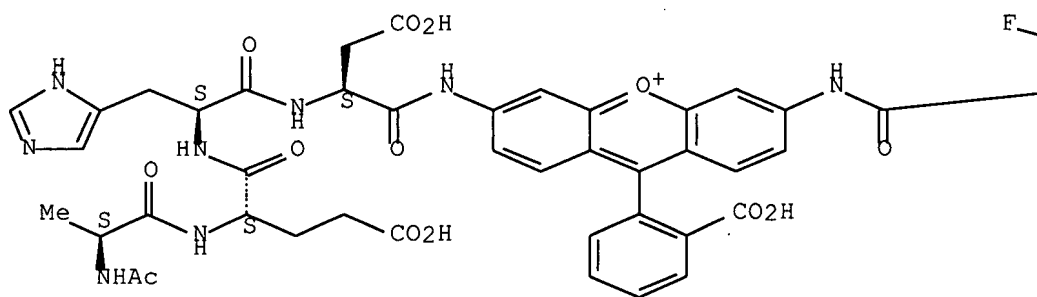


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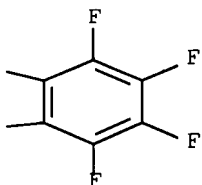
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(CA INDEX NAME)

Absolute stereochemistry.

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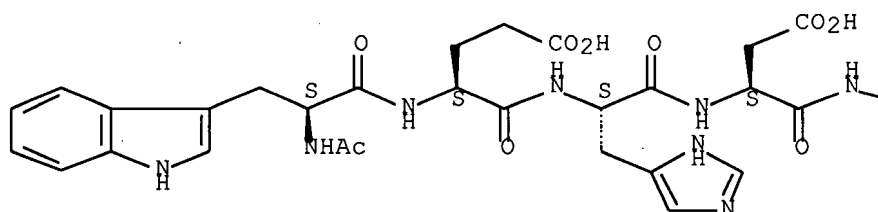


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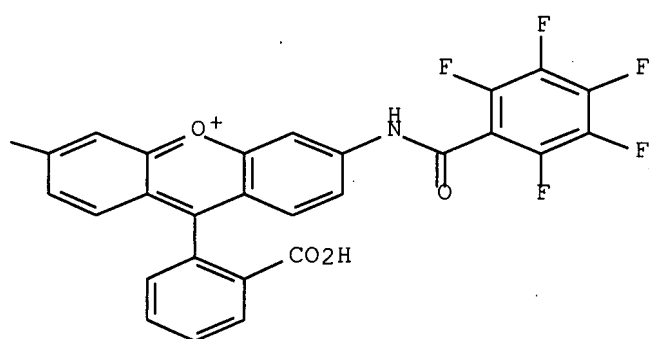
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Absolute stereochemistry.

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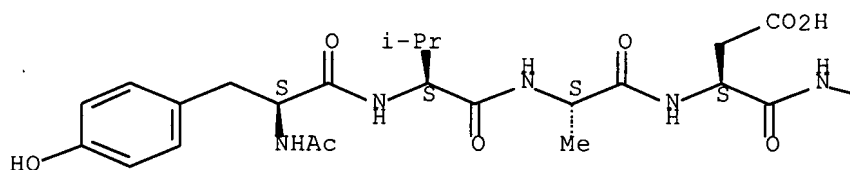


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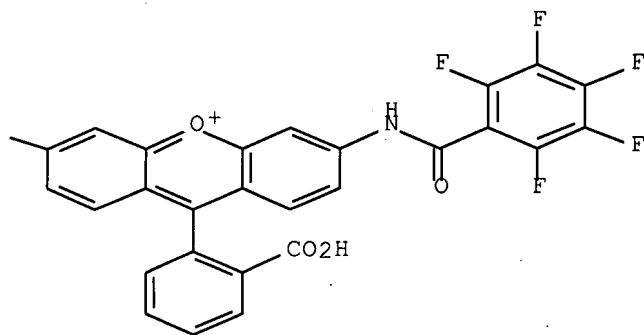
CN L- $\alpha$ -Asparagine, N-acetyl-L-tyrosyl-L-valyl-L-alanyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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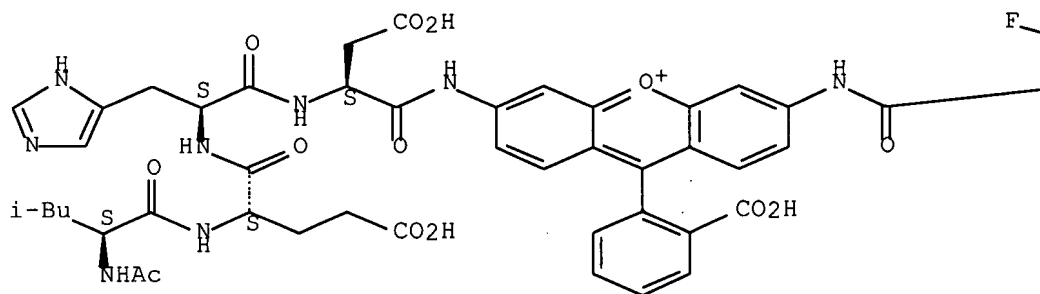


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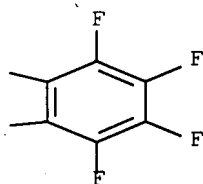
CN L- $\alpha$ -Asparagine, N-acetyl-L-leucyl-L- $\alpha$ -glutamyl-L-histidyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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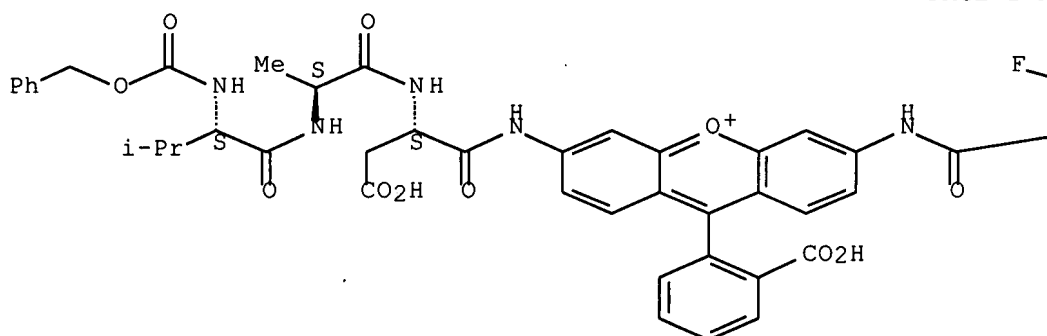


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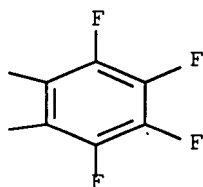
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-L-alanyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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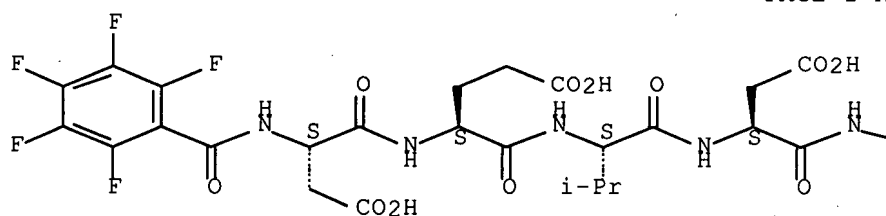


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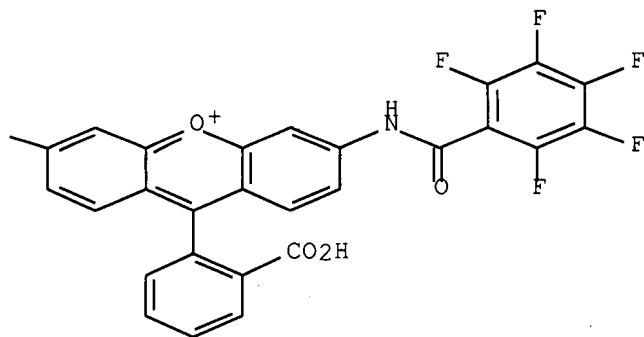
CN L- $\alpha$ -Asparagine, N-(pentafluorobenzoyl)-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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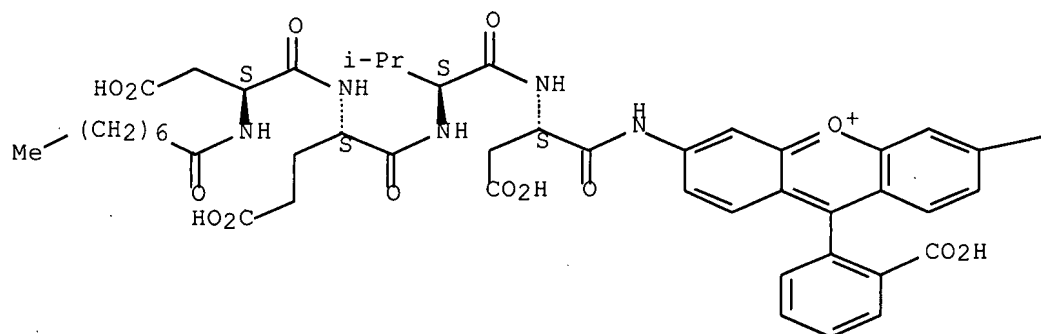


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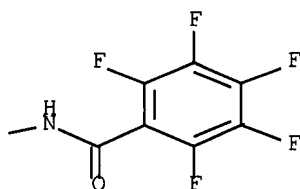
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Absolute stereochemistry.

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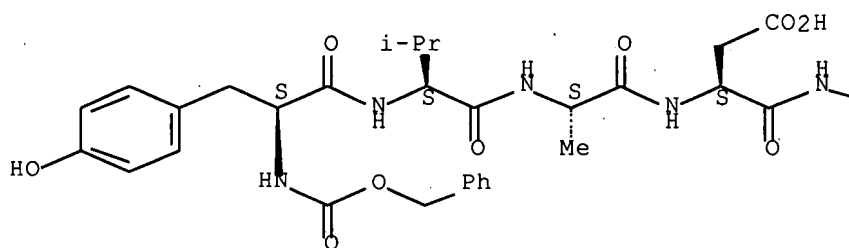


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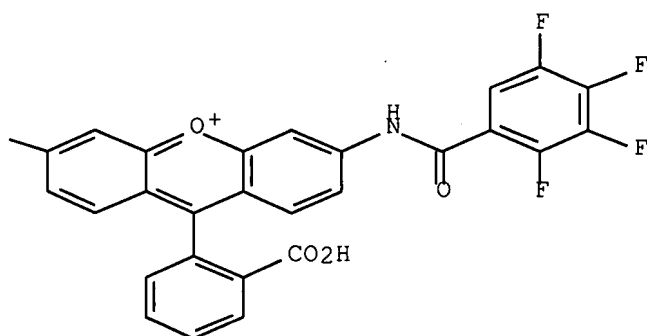
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-tyrosyl-L-valyl-L-alanyl-N-[9-(2-carboxyphenyl)-6-[(2,3,4,5-tetrafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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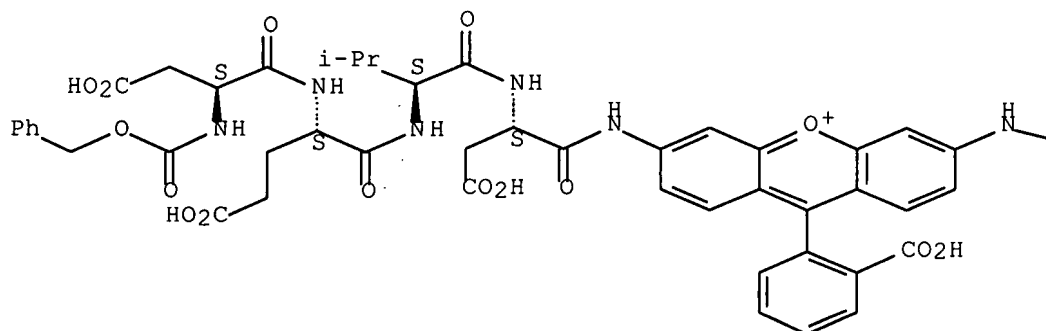


RN 256527-36-3 USPATFULL

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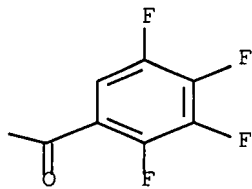
Absolute stereochemistry.

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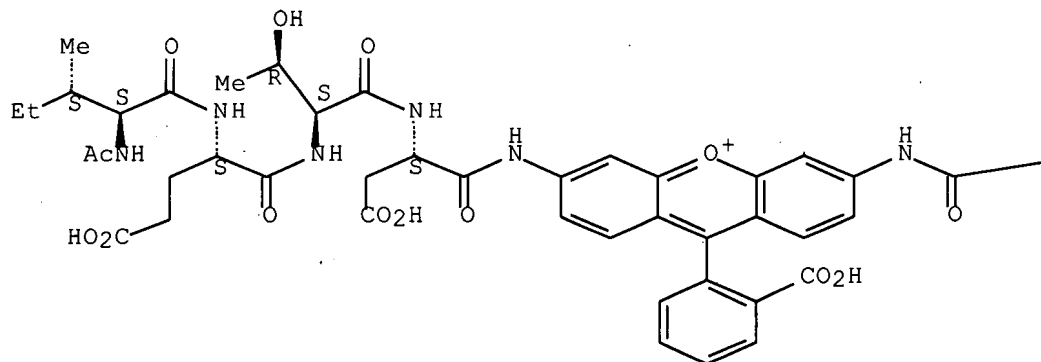


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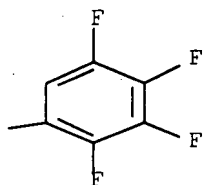
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Absolute stereochemistry.

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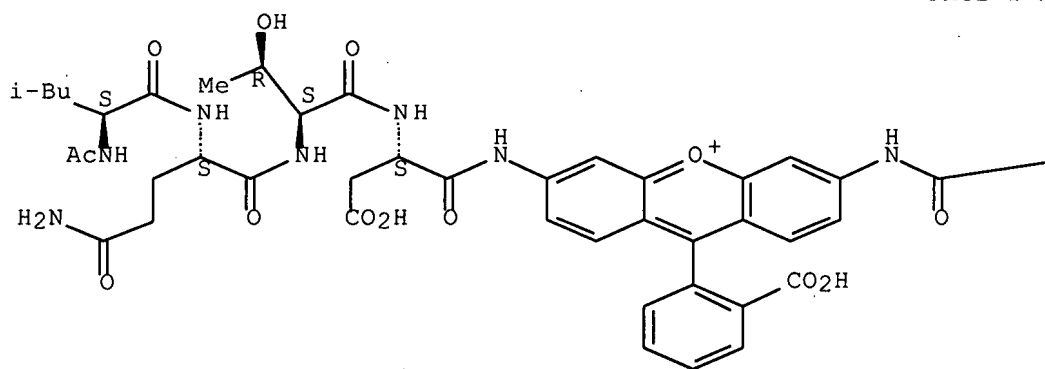


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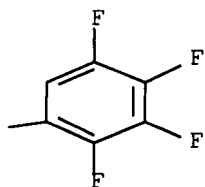
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Absolute stereochemistry.

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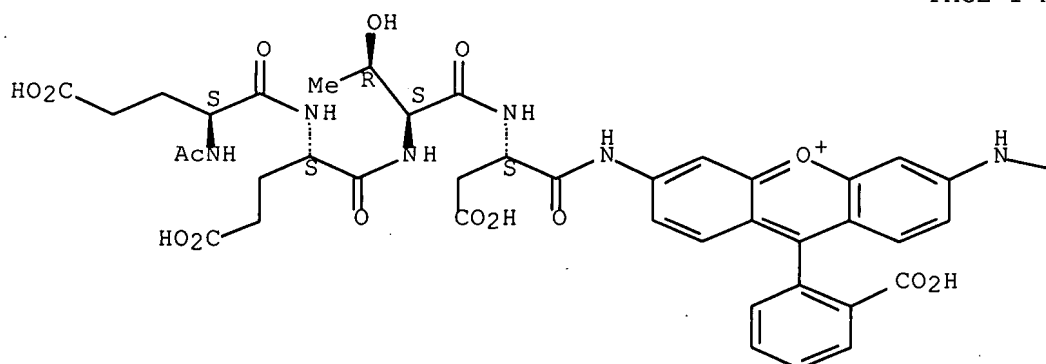


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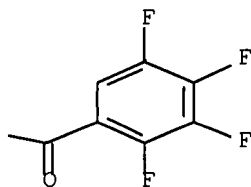
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -glutamyl-L- $\alpha$ -glutamyl-L-threonyl-N-[9-(2-carboxyphenyl)-6-[(2,3,4,5-tetrafluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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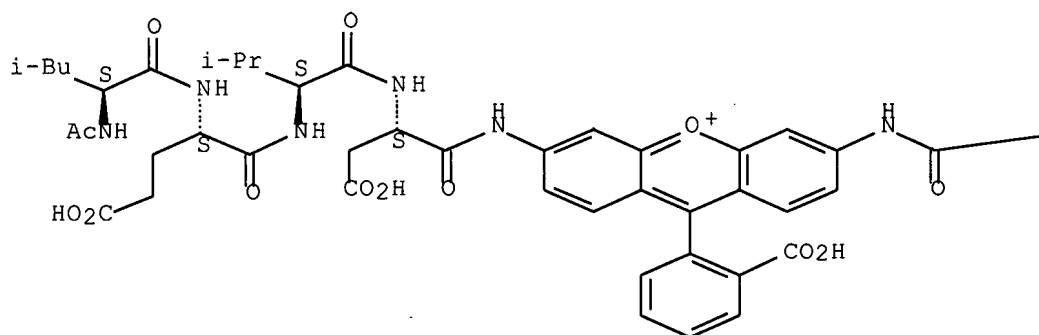


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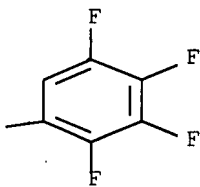
CN L- $\alpha$ -Asparagine, N-acetyl-L-leucyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(2,3,4,5-tetrafluorobenzoyl)amino]xanthylum-3-yl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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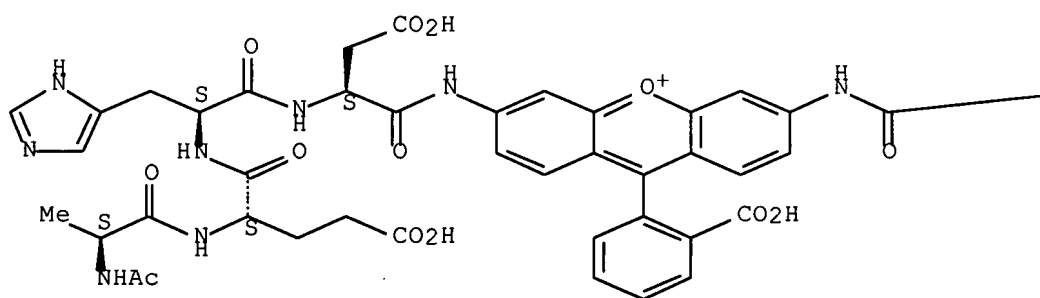


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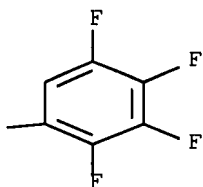
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Absolute stereochemistry.

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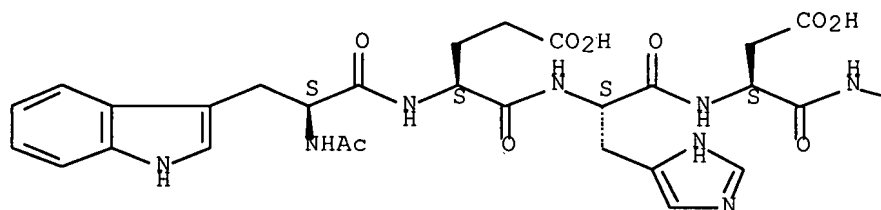


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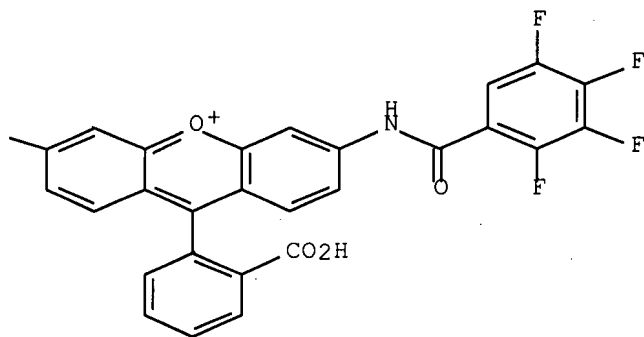
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N-[9-(2-carboxyphenyl)-6-[(2,3,4,5-tetrafluorobenzoyl)amino]xanthylum-3-  
yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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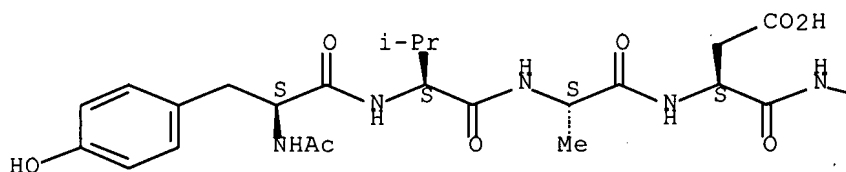


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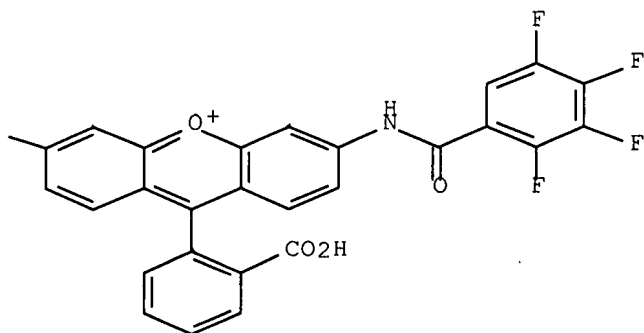
CN L- $\alpha$ -Asparagine, N-acetyl-L-tyrosyl-L-valyl-L-alanyl-N-[9-(2-carboxyphenyl)-6-[(2,3,4,5-tetrafluorobenzoyl)amino]xanthylum-3-yl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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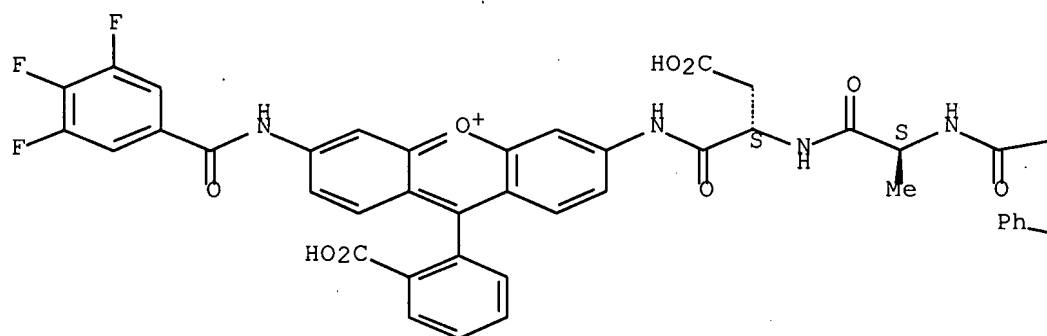


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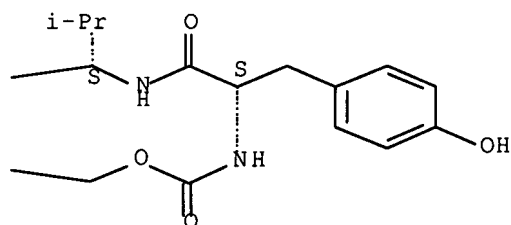
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Absolute stereochemistry.

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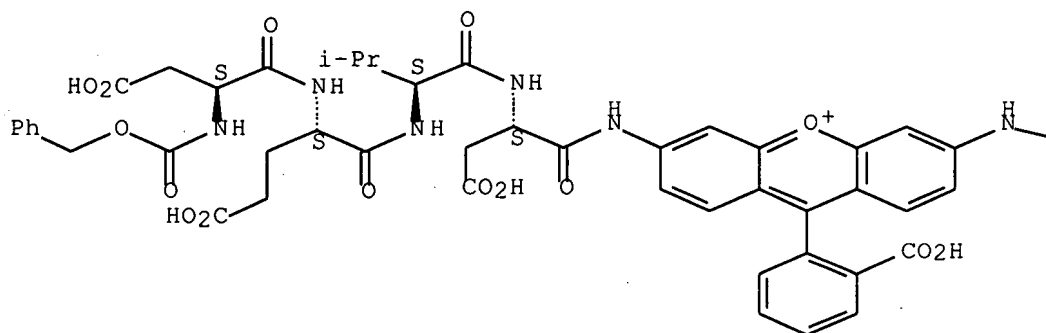


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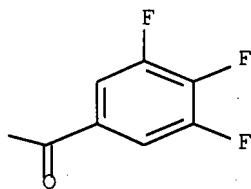
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Absolute stereochemistry.

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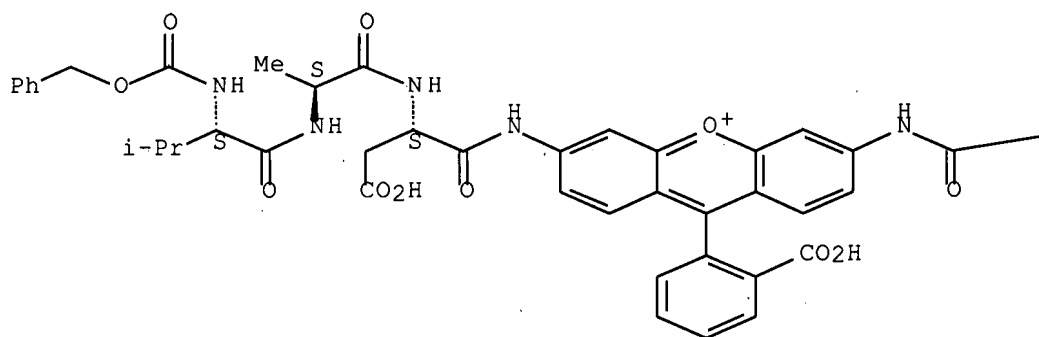


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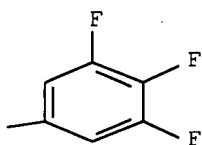
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(CA INDEX NAME)

Absolute stereochemistry.

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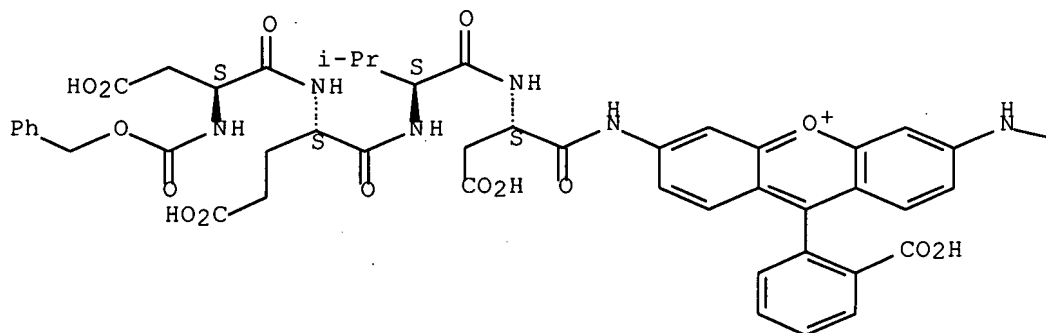


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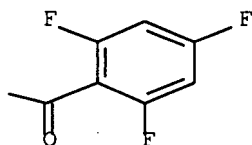
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(2,4,6-trifluorobenzoyl)amino]xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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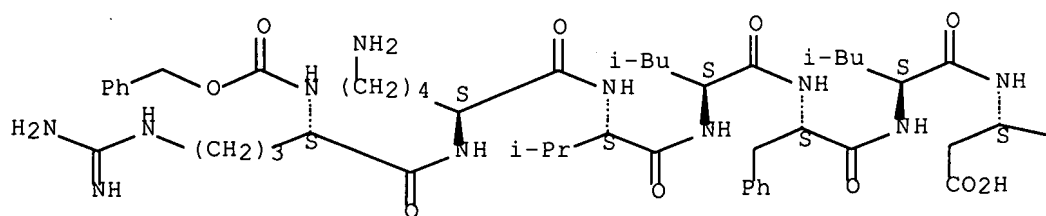


RN 256527-89-6 USPATFULL

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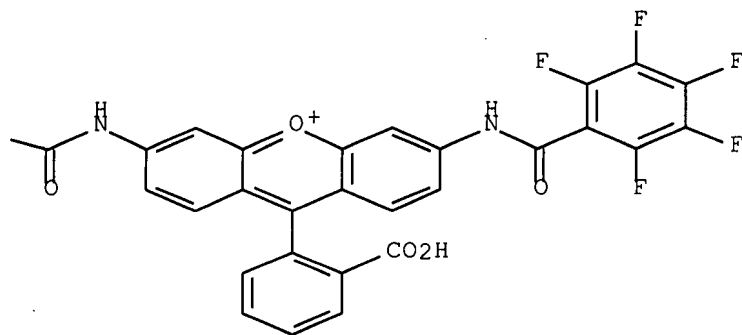
Absolute stereochemistry.

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IT 256528-72-0P 256528-75-3P 256528-80-0P

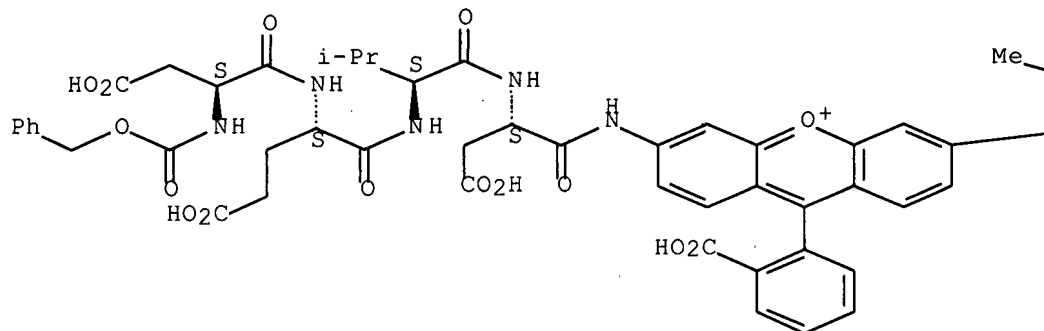
(fluorescence dyes and their applications for whole cell  
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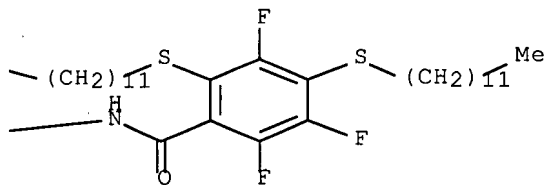
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6-[[2,4-bis(dodecylthio)-3,5,6-trifluorobenzoyl]amino]-9-(2-carboxyphenyl)xanthylum-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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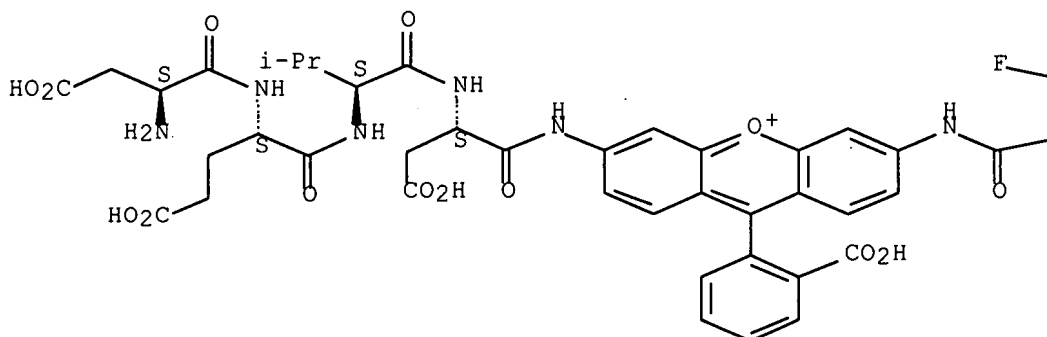
RN 256528-75-3 USPATFULL

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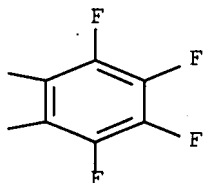
Absolute stereochemistry.

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● HBr

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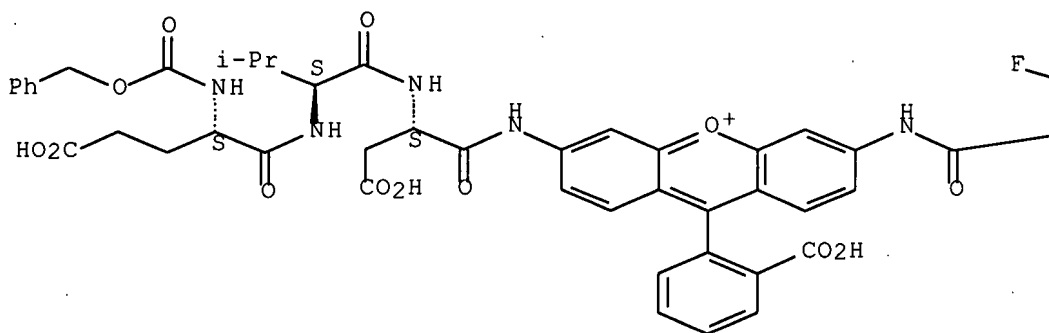


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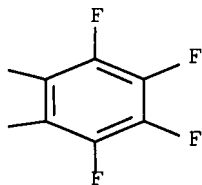
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Absolute stereochemistry.

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IT 256527-37-4P

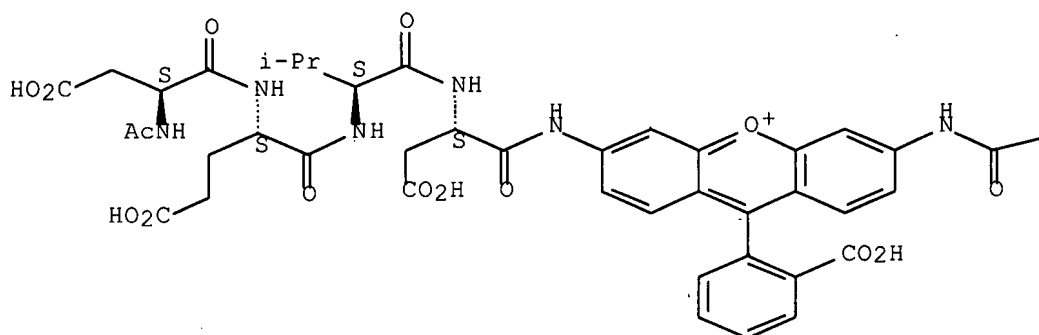
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RN 256527-37-4 USPATFULL

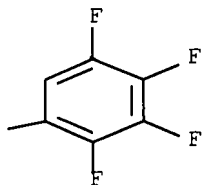
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(2,3,4,5-tetrafluorobenzoyl)amino]xanthylium-3-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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## STRUCTURE SEARCH

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FILE 'REGISTRY' ENTERED AT 10:34:28 ON 27 DEC 2006

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TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

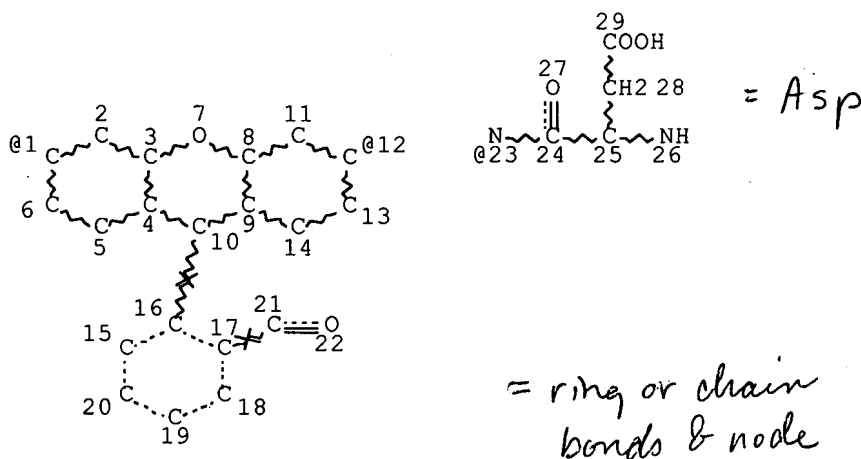
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

L17

STR



VPA 23-12/1 U

NODE ATTRIBUTES:

NSPEC IS RC AT 21

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 29

STEREO ATTRIBUTES: NONE

L19 101 SEA FILE=REGISTRY SSS FUL L17

100.0% PROCESSED 1421 ITERATIONS  
SEARCH TIME: 00.00.01

101 ANSWERS

=> fil capl; s l19  
FILE 'CAPLUS' ENTERED AT 10:34:37 ON 27 DEC 2006  
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FILE COVERS 1907 - 27 Dec 2006 VOL 146 ISS 1  
FILE LAST UPDATED: 26 Dec 2006 (20061226/ED)

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'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

L42 16 L19

=> s l42 not l23  
L43 14 L42 NOT L23

=> fil uspatf; d que nos l37  
FILE 'USPATFULL' ENTERED AT 10:35:38 ON 27 DEC 2006  
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 26 Dec 2006 (20061226/PD)  
FILE LAST UPDATED: 26 Dec 2006 (20061226/ED)  
HIGHEST GRANTED PATENT NUMBER: US7155745  
HIGHEST APPLICATION PUBLICATION NUMBER: US2006288461  
CA INDEXING IS CURRENT THROUGH 26 Dec 2006 (20061226/UPCA)  
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 26 Dec 2006 (20061226/PD)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2006  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2006

L17 STR  
L19 101 SEA FILE=REGISTRY SSS FUL L17  
L37 9 SEA FILE=USPATFULL ABB=ON L19

=> s l37 not l38  
L44 4 L37 NOT L38

=> dup rem 143,144

FILE 'CAPLUS' ENTERED AT 10:35:47 ON 27 DEC 2006

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FILE 'USPATFULL' ENTERED AT 10:35:47 ON 27 DEC 2006

CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

PROCESSING COMPLETED FOR L43

PROCESSING COMPLETED FOR L44

L45 16 DUP REM L43 L44 (2 DUPLICATES REMOVED)

ANSWERS '1-14' FROM FILE CAPLUS

ANSWERS '15-16' FROM FILE USPATFULL

=> => d ibib ed abs hitstr 145 1-16; fil hom

L45 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2006:1173784 CAPLUS Full-text

DOCUMENT NUMBER: 145:483703

TITLE: Method for identifying Bcl2L12 polypeptide activators and inhibitors in relation to cancer treatment

INVENTOR(S): Stegh, Alex; Kim, Hyung Gee; Depinho, Ronald A.; Chin, Lynda

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 47pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006252053	A1	20061109	US 2005-259640	20051025
WO 2004096991	A2	20041111	WO 2004-US12591	20040423
WO 2004096991	A3	20050728		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-465573P P 20030425  
WO 2004-US12591 A2 20040423

ED Entered STN: 09 Nov 2006

AB The invention relates to methods and materials involved in identifying Bcl2L12 polypeptide activators and inhibitors. Bcl2L12 polypeptide activities include, without limitation, the ability to inhibit caspase activation (e.g., caspase-9 activation), block apoptosis, bind Apaf-1 polypeptides, promote necrosis, contribute to phosphorylation of MAP kinases (e.g., Erk1 and Erk2 polypeptides), promote cell growth, promote cell transformation, bind p53 polypeptides, and inhibit p53 polypeptide driven transcription. The invention also provides methods and materials related to treating mammals (e.g., humans) having cancer cells that express a Bcl2L12 polypeptide. For example, the

invention provides methods and materials related to treating mammals having a glioma by administering a compound that reduces a Bcl2L12 polypeptide activity such as the ability to block apoptosis and promote cell growth and transformation. A high-throughput screen (HTS) was developed to identify agents (e.g., small organic compds.) that inhibit the tumorigenic activity of Bcl2L12 polypeptides. The HTS assay monitored the activation of caspase-7 polypeptides upon compound and staurosporine (STS)-induced apoptosis using a highly sensitive fluorogenic substrate, (Z-DEVD)2-Rh110, whose signal was monitored at excitation/emission 496 nm/520 nm [EnzoLylte™ Rh110 Caspase-7 Assay Kit (Anapsec)]. Briefly, Ink4a/Arf deficient astrocytes stably overexpressing Bcl2L12 polypeptide or control transfectants were plated into 384 well plates containing small mols. at a concentration of 5  $\mu$ M. In parallel, the pan-specific kinase inhibitor staurosporine (STS) was added at a concentration of 1  $\mu$ M as a pos. control.

IT 223538-61-2, (Z-DEVD)2-Rh 110

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

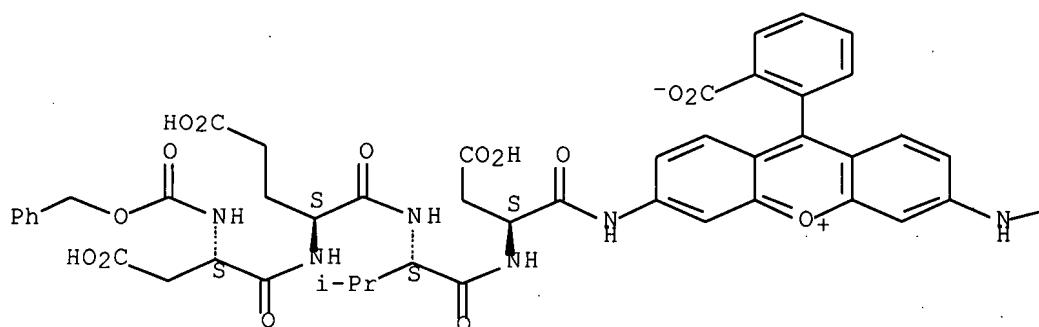
((Z-DEVD)2-Rh 110, use in HTS caspase-7 activator/inhibitor assay; method for identifying Bcl2L12 polypeptide activators and inhibitors in relation to cancer treatment)

RN 223538-61-2 CAPLUS

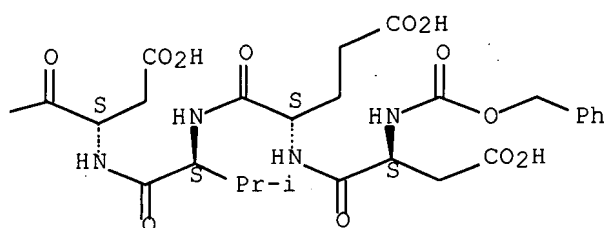
CN L- $\alpha$ -Asparagine, 4,4'-[9-(2-carboxyphenyl)xanthylum-3,6-diyl]bis[N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



L45 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 1999:704906 CAPLUS Full-text

DOCUMENT NUMBER: 131:319656

TITLE: Method and reagent for monitoring apoptosis and distinguishing apoptosis from necrosis using enzyme fluorescent assay

INVENTOR(S): Landrum, Eileen; Galliounghi, Adry; Garcia, Nancy; Del Valle, Ursino; Lucas, Frank J.

PATENT ASSIGNEE(S): Coulter International Corp., USA

SOURCE: U.S., 21 pp., Cont.-in-part of U.S. 5,698,411.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5976822	A	19991102	US 1997-915414	19970820
US 5698411	A	19971216	US 1995-444051	19950518
WO 9909208	A1	19990225	WO 1998-US16832	19980813

W: JP

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.:

US 1995-444051 A2 19950518

US 1997-915414 A 19970820

ED Entered STN: 04 Nov 1999

AB The ability to determine the stage or pathway of cysteine proteases in a single cell assay has long been desired as a material event in apoptosis. The present invention relates to a method and assay reagents for determining enzyme activity and relating said activity to the apoptotic pathway. In addition, the method find utility in distinguishing apoptotic activity from necrotic activity.

IT 248584-58-9

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
(method and reagent for monitoring apoptosis and distinguishing apoptosis from necrosis using enzyme fluorescent assay)

RN 248584-58-9 CAPLUS

CN L- $\alpha$ -Asparagine, 4,4'-[9-(2-carboxyphenyl)xanthylum-3,6-diyl]bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-, chloride,  
bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

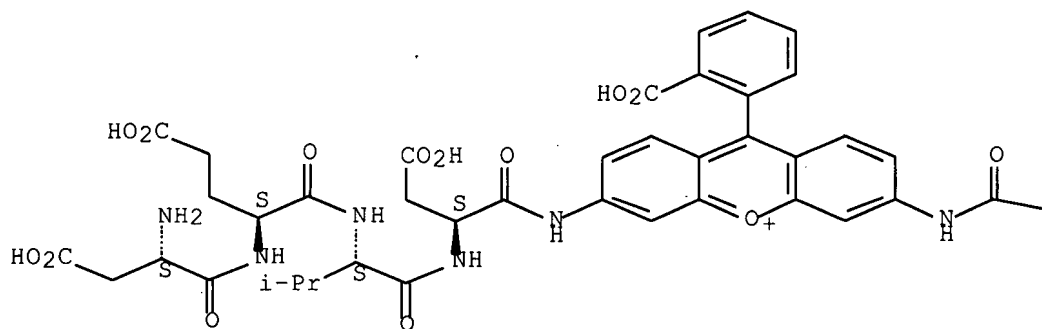
CRN 248584-57-8

CMF C56 H67 N10 O23

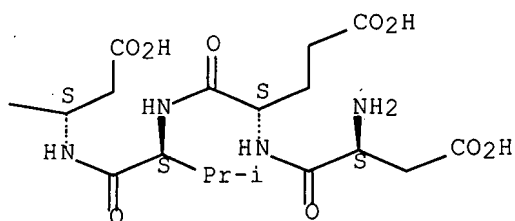
Absolute stereochemistry.



PAGE 1-A



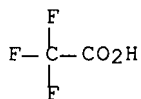
PAGE 1-B



CM 2

CRN 76-05-1

CMF C2 H F3 O2



IT 248584-54-5P 248584-56-7P

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)  
 (method and reagent for monitoring apoptosis and distinguishing apoptosis from necrosis using enzyme fluorescent assay)

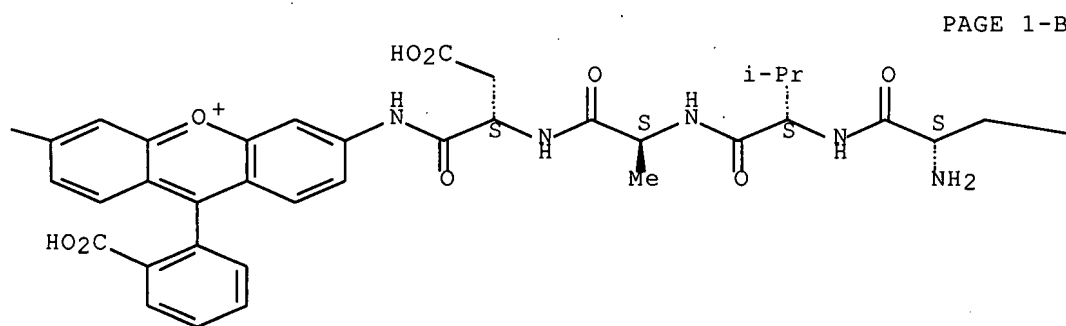
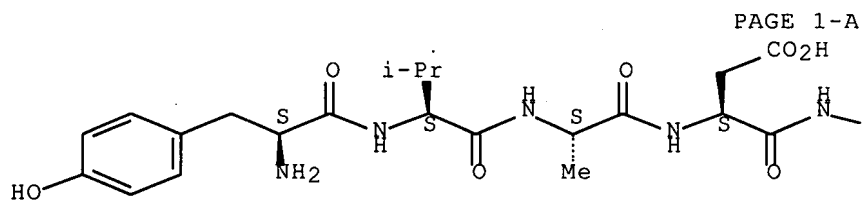
RN 248584-54-5 CAPLUS

CN L- $\alpha$ -Asparagine, 4,4'-[9-(2-carboxyphenyl)xanthylum-3,6-diyl]bis[L-tyrosyl-L-valyl-L-alanyl-, chloride, bis(trifluoroacetate) (salt) (9CI)  
 (CA INDEX NAME)

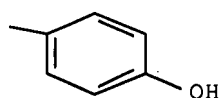
CM 1

CRN 248584-53-4  
CMF C62 H71 N10 O17

Absolute stereochemistry.

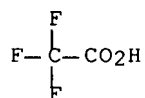


PAGE 1-C



CM 2

CRN 76-05-1  
CMF C2 H F3 O2



RN 248584-56-7 CAPLUS

CN L- $\alpha$ -Asparagine, 3,3'-[9-(2-carboxyphenyl)xanthylum-3,6-diyl]bis[L-alanyl-L-alanyl-, chloride, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

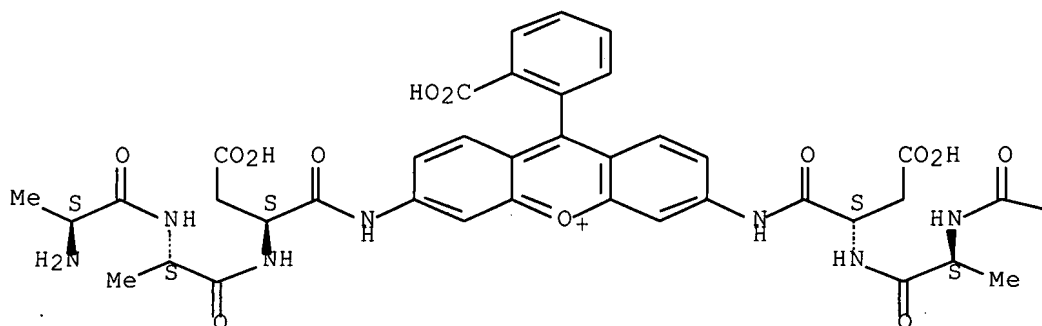
CM 1

CRN 248584-55-6

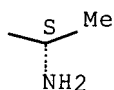
CMF C40 H45 N8 O13

Absolute stereochemistry.

PAGE 1-A



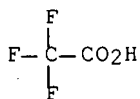
PAGE 1-B



CM 2

CRN 76-05-1

CMF C2 H F3 O2



REFERENCE COUNT:

7

THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:71179 CAPLUS Full-text

DOCUMENT NUMBER: 142:172167

TITLE: Enzyme substrates containing fluorogenic and enzyme-cleavable moieties and PNA identifier tag, arrays of said substrates, and methods for detecting biological pathway activation

INVENTOR(S): Harris, Jennifer L.; Damoiseaux, Robert; Backes, Bradley J.; Winssinger, Nicolas

PATENT ASSIGNEE(S): IRM LLC, Bermuda

SOURCE: PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005007663	A2	20050127	WO 2004-US22776	20040714
WO 2005007663	A3	20050818		
WO 2005007663	A9	20050915		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2005153306 A1 20050714 US 2004-892402 20040714

PRIORITY APPLN. INFO.: US 2003-487464P P 20030714

OTHER SOURCE(S): MARPAT 142:172167

ED Entered STN: 27 Jan 2005

AB The present invention provides, inter alia, fluorogenic enzyme substrates, such as fluorogenic polypeptide substrates, libraries of fluorogenic enzyme substrates and methods for assaying for enzymically active enzymes, such as hydrolases (e.g., proteases), in biol. samples. Thus, a library of rhodamine conjugates with protease-cleavable peptides and PNA's, the sequences of which identify the amino acids of the peptides, was prepared. These substrates were immobilized on an array and used to analyze cell lysates for activation of the apoptotic pathway (i.e., for caspase-3 activity).

IT 832105-72-3P

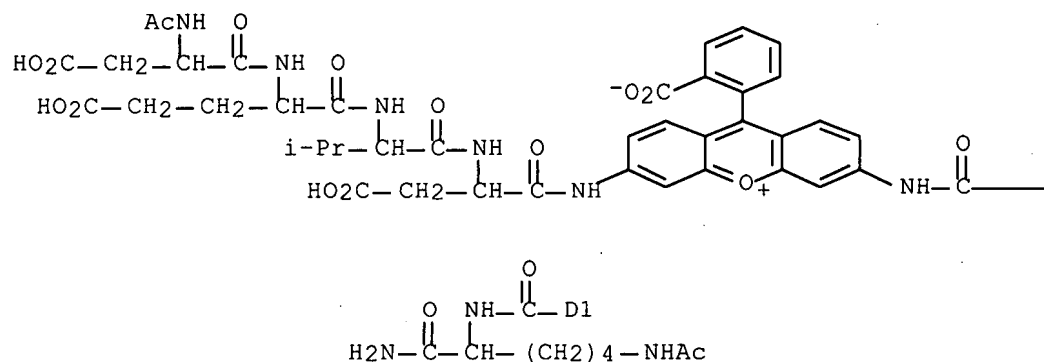
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

(enzyme substrates containing fluorogenic and enzyme-cleavable moieties and PNA identifier tag, arrays of said substrates, and methods for detecting biol. pathway activation)

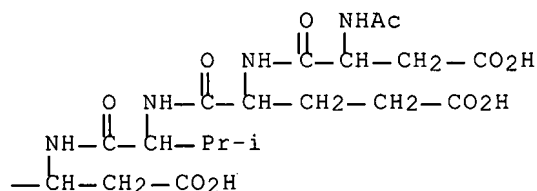
RN 832105-72-3 CAPLUS

CN L- $\alpha$ -Asparagine, 4,4'-[9-[4(or 5)-[[[(1S)-5-(acetylamino)-1-(aminocarbonyl)pentyl]amino]carbonyl]-2-carboxyphenyl]xanthylum-3,6-diyl]bis[N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

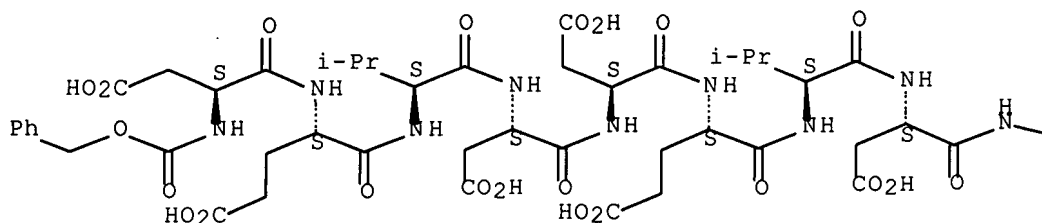


L45 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2005:331935 CAPLUS Full-text  
 DOCUMENT NUMBER: 143:55499  
 TITLE: N-DEVD-N'-morpholinecarbonyl-rhodamine 110: novel  
 caspase-3 fluorogenic substrates for cell-based  
 apoptosis assay  
 AUTHOR(S): Wang, Zhi-Qiang; Liao, Jinfang; Diwu, Zhenjun  
 CORPORATE SOURCE: Department of Reagent and Assay Development, Molecular  
 Devices Corporation, Sunnyvale, CA, 94089, USA  
 SOURCE: Bioorganic & Medicinal Chemistry Letters (2005),  
 15(9), 2335-2338  
 CODEN: BMCLE8; ISSN: 0960-894X  
 PUBLISHER: Elsevier B.V.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 143:55499  
 ED Entered STN: 19 Apr 2005  
 AB A novel caspase-3 substrate N-Ac-DEVD-N'-MC-R110, which is a fluorogenic  
 substrate cleavable in a single step, has been prepared It has a  
 significantly higher enzyme turnover rate and sensitivity for detecting  
 caspase-3 activity both in solution and living cells than existing fluorogenic  
 substrates.  
 IT **854018-31-8**  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (N-DEVD-N'-morpholinecarbonyl-rhodamine 110 is novel caspase-3  
 fluorogenic substrates for cell-based apoptosis assay)  
 RN 854018-31-8 CAPLUS  
 CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L-

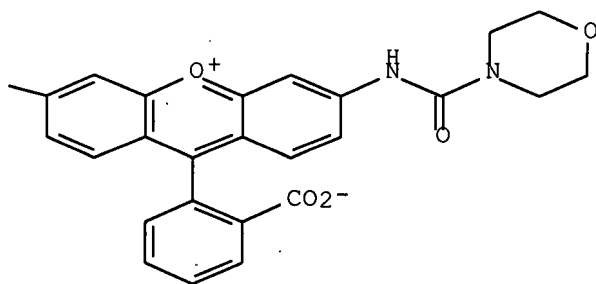
$\alpha$ -glutamyl-L-valyl-L- $\alpha$ -aspartyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(4-morpholinylcarbonyl)amino]xanthylum-3-yl]-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



IT 854018-26-1P

RL: BSU (Biological study, unclassified); SPN (Synthetic preparation);  
BIOL (Biological study); PREP (Preparation)

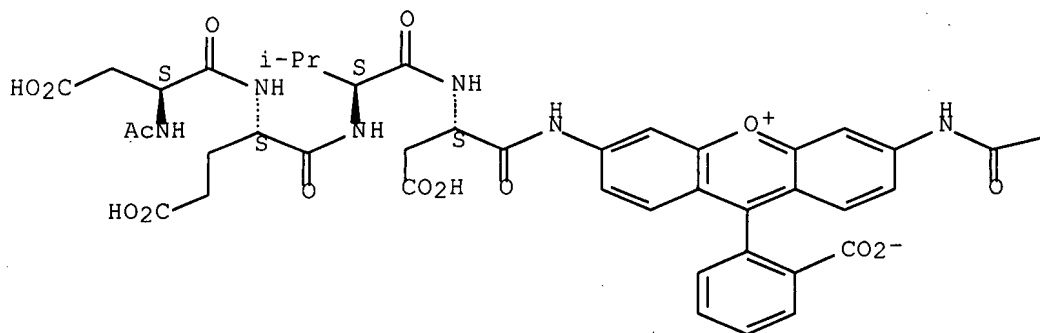
(N-DEVD-N'-morpholinecarbonyl-rhodamine 110 is novel caspase-3  
fluorogenic substrates for cell-based apoptosis assay)

RN 854018-26-1 CAPLUS

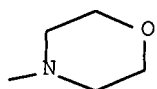
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(4-morpholinylcarbonyl)amino]xanthylum-3-yl]-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:966954 CAPLUS Full-text

DOCUMENT NUMBER: 142:109282

TITLE: Design and synthesis of photochemically controllable caspase-3

AUTHOR(S): Endo, Masayuki; Nakayama, Koji; Kaida, Yuka; Majima, Teisuro

CORPORATE SOURCE: Institute of Scientific and Industrial Research, Osaka University, Ibaraki, Osaka, 567-0047, Japan

SOURCE: Angewandte Chemie, International Edition (2004), 43(42), 5643-5645

CODEN: ACIEF5; ISSN: 1433-7851

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 15 Nov 2004

AB The selective cleavage achieved by activated caspase-8 has been mimicked by using a photofunctionalized caspase-3 having 2-nitrophenylglycine (Npg) at a specific position of the peptide chain. The study shows that the activity of caspase-3 has been clearly expressed by photoirradn. and that autocleavage of caspase-3 has been suppressed by the site-selective incorporation of the Npg residue.

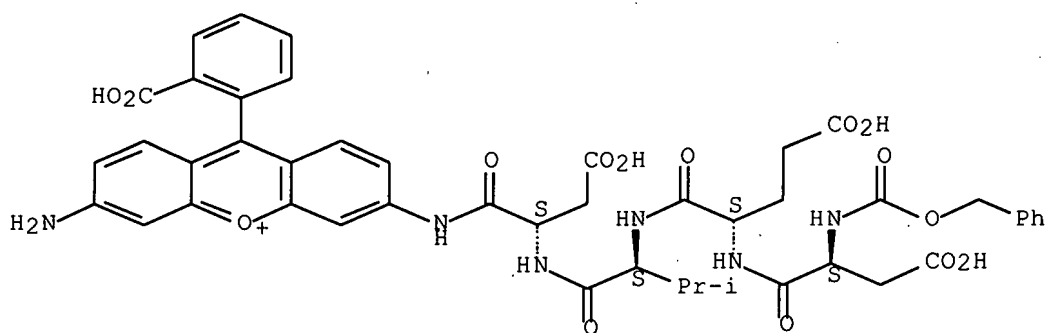
IT 820991-63-7

RL: BSU (Biological study, unclassified); BIOL (Biological study) (design and synthesis of photochem. controllable caspase-3)

RN 820991-63-7 CAPLUS

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6-amino-9-(2-carboxyphenyl)xanthylum-3-yl]-, chloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

● Cl<sup>-</sup>

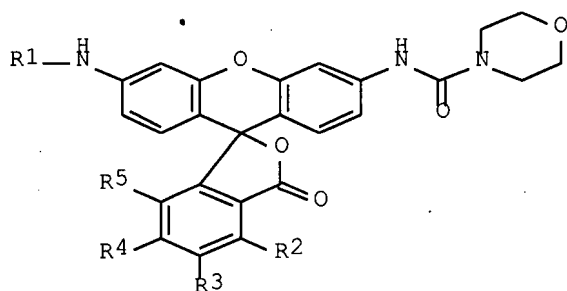
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:950990 CAPLUS Full-text  
 DOCUMENT NUMBER: 140:5311  
 TITLE: Preparation of rhodamine peptide derivatives as  
 luminogenic protease substrates  
 INVENTOR(S): Diwu, Zhenjun; Liao, Jinfang; Wang, Zhiqiang  
 PATENT ASSIGNEE(S): Molecular Devices Corporation, USA  
 SOURCE: PCT Int. Appl., 64 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003099780	A2	20031204	WO 2003-US16530	20030523
WO 2003099780	A3	20040401		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003234638	A1	20031212	AU 2003-234638	20030523
EP 1517997	A2	20050330	EP 2003-729139	20030523
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRIORITY APPLN. INFO.:			US 2002-383363P	P 20020524
			WO 2003-US16530	W 20030523

OTHER SOURCE(S): MARPAT 140:5311  
 ED Entered STN: 07 Dec 2003  
 GI





I

AB The invention relates to rhodamine derivs. I [R1 is a covalently-bound moiety that, upon being cleaved by an enzyme, generates a rhodamine product; R2-R5 are H, halo, alkyl, alkoxy, sulfonic acid, carboxylic acid, -L-Rx or -L-Sc, where Rx is a reactive functional group, Sc is a conjugated substance, and L is a covalent linking moiety] which are luminogenic substrates for a large variety of protease enzymes. Thus, I (R1 = Ac-Asp-Glu-Val-Asp, R2-R5 = H) was prepared via step-wise peptide coupling and applied to the detection of human recombinant caspase-3 in whole cells.

IT **628302-80-7P**

RL: DGN (Diagnostic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

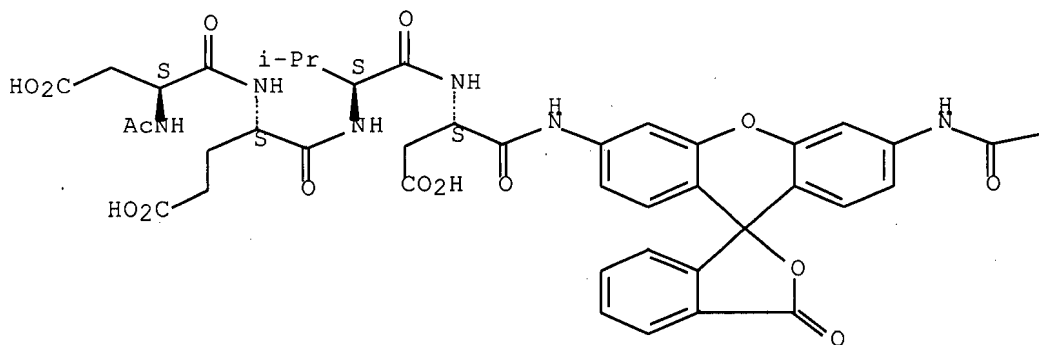
(preparation of rhodamine peptide derivs. as luminogenic protease substrates)

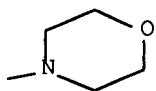
RN 628302-80-7 CAPLUS

CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[(4-morpholinylcarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





L45 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:120333 CAPLUS Full-text

DOCUMENT NUMBER: 138:250621

TITLE: N-Ac-DEVD-N'-(Polyfluorobenzoyl)-R110: Novel Cell-Permeable Fluorogenic Caspase Substrates for the Detection of Caspase Activity and Apoptosis

AUTHOR(S): Zhang, Han-Zhong; Kasibhatla, Shailaja; Guastella, John; Tseng, Ben; Drewe, John; Cai, Sui Xiong

CORPORATE SOURCE: Maxim Pharmaceuticals, San Diego, CA, 92121, USA

SOURCE: Bioconjugate Chemistry (2003), 14(2), 458-463

CODEN: BCCHE5; ISSN: 1043-1802

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 138:250621

ED Entered STN: 17 Feb 2003

AB N-Pentafluorobenzoyl-R110 (1a) and N-(2,3,4,5-tetrafluorobenzoyl)-R110 (1b) with enhanced cell retention properties, were prepared from rhodamine 110 (R-110) and the corresponding polyfluorobenzoyl chloride. N-Ac-DEVD-N'-pentafluorobenzoyl-R110 (3a) and N-Ac-DEVD-N'-(2,3,4,5-tetrafluorobenzoyl)-R110 (3b) were prepared as tetrapeptide substrates for caspases. Substrate 3b was efficiently cleaved by human recombinant caspase-3 in an enzyme assay. Substrate 3b also was efficiently cleaved in cell-based apoptosis assays. After cleavage in apoptotic cells by activated caspases, the substrate becomes fluorescent as measured by flow cytometry. These substrates should prove useful in cell-based assays for studying apoptosis inducers and inhibitors.

IT 502497-89-4P 502497-90-7P

RL: BSU (Biological study, unclassified); SPN (Synthetic preparation);

BIOL (Biological study); PREP (Preparation)

(novel cell-permeable fluorogenic caspase substrate

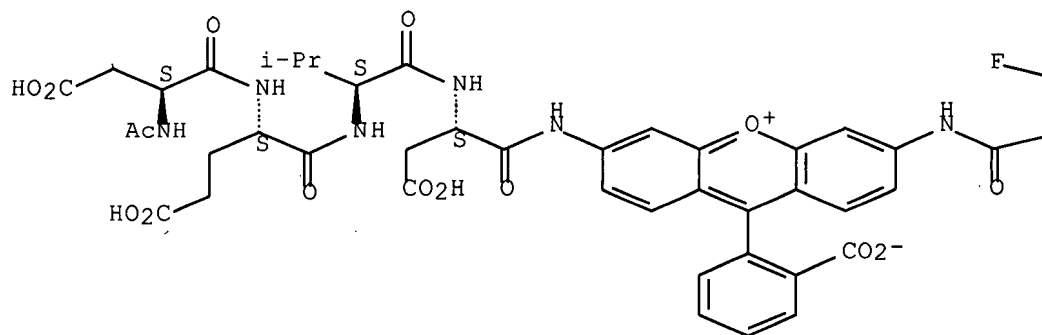
N-Ac-DEVD-N'-(Polyfluorobenzoyl)-R110 for caspase activity and apoptosis)

RN 502497-89-4 CAPLUS

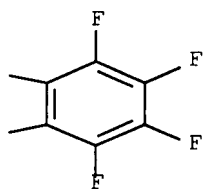
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(pentafluorobenzoyl)amino]xanthylum-3-yl]-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

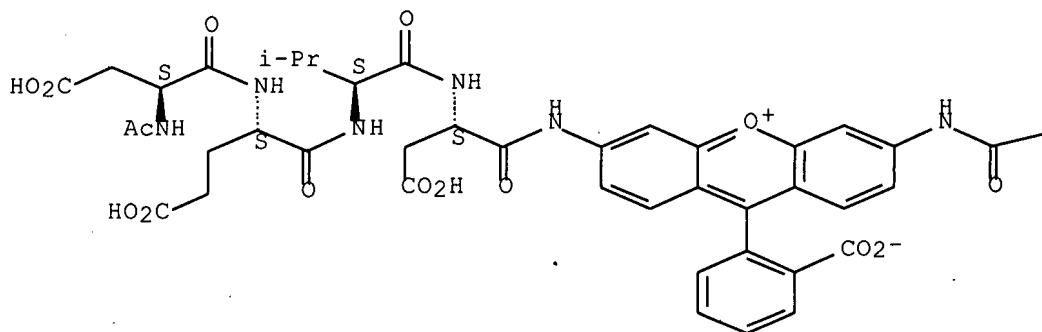


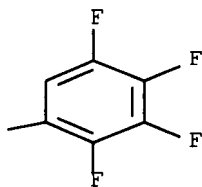
RN 502497-90-7 CAPLUS

CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[9-(2-carboxyphenyl)-6-[(2,3,4,5-tetrafluorobenzoyl)amino]xanthylum-3-yl]-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2002:391979 CAPLUS Full-text  
 DOCUMENT NUMBER: 136:382524  
 TITLE: Method for the simultaneous determination of two fluorescent emissions with a single laser flow cytometer  
 INVENTOR(S): Debatin, Michael; Stahnke, Karsten; Hug, Hubert  
 PATENT ASSIGNEE(S): Deutsches Krebsforschungszentrum Stiftung Des Oeffentlichen Rechts, Germany  
 SOURCE: PCT Int. Appl., 23 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002040978	A2	20020523	WO 2001-DE4125	20011030
WO 2002040978	A3	20021128		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10053747	A1	20020523	DE 2000-10053747	20001030
DE 10053747	C2	20021024		
AU 2002021540	A5	20020527	AU 2002-21540	20011030
PRIORITY APPLN. INFO.:			DE 2000-10053747	A 20001030
			WO 2001-DE4125	W 20011030

ED Entered STN: 24 May 2002

AB In flow cytometry there sometimes occurs the problem that it is desirable to simultaneously determine two different fluorochromes for various physiol. features, the peak emission wavelengths of which lie so close together that the emissions overlap. A simultaneous measurement of such fluorochromes is conventionally not possible, even with application of an electronic compensation. The invention thus relates to a method for the simultaneous determination of the fluorescent emissions of a first fluorochrome and a second fluorochrome, the emission wavelength region of which overlaps that of the first fluorochrome, in a single laser flow cytometer with two fluorescent channels of various receiver wavelengths. The method comprises the following steps: (A) stimulation of the first fluorochrome of reference cells marked

with said fluorochrome, by means of a laser beam suitable for both fluorochromes; (B) adjustment of the photomultiplier tube voltage in the second fluorescence channel, set for the emissions from the second fluorochrome, to a value at which no fluorescence emission signal is detected in the second fluorescence channel as a result of the first fluorochrome; (C) stimulation of the fluorochrome of the sample cells, marked with the first and second fluorochrome by means of the laser beam; (D) measurement of the fluorescence emission signal of the first fluorochrome in the sample cells in the first fluorescence channel set for the emissions of the first fluorochrome and (E) measurement of the fluorescence emission signal of the second fluorochrome in the sample cells in the second fluorescence channel.

IT 224193-20-8 251358-34-6

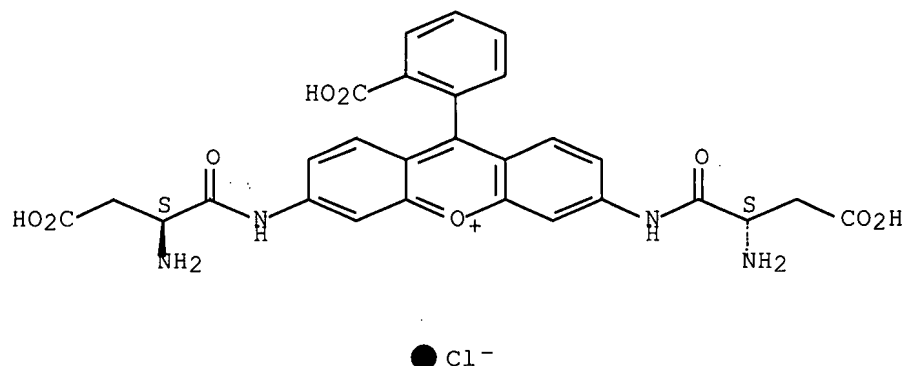
RL: PRP (Properties)

(method for simultaneous determination of two fluorescent emissions with a single laser flow cytometer)

RN 224193-20-8 CAPLUS

CN Benzoic acid, 2-[3,6-bis[[ (2S)-2-amino-3-carboxy-1-oxopropyl]amino]xanthylum-9-yl]-, chloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

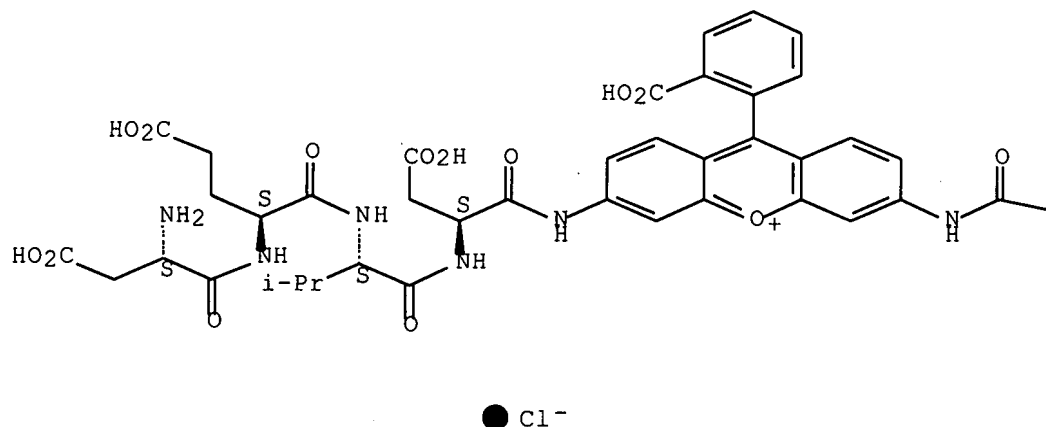


RN 251358-34-6 CAPLUS

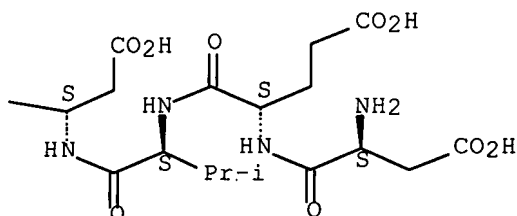
CN L-α-Asparagine, 4,4'-[9-(2-carboxyphenyl)xanthylum-3,6-diyl]bis[L-α-aspartyl-L-α-glutamyl-L-valyl]-, chloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



L45 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:641074 CAPLUS Full-text  
 DOCUMENT NUMBER: 140:283162  
 TITLE: Other methods of caspase activity monitoring  
 AUTHOR(S): Hug, Hubert; Burek, Christof; Los, Marek  
 CORPORATE SOURCE: University Children's Hospital, Ulm, Germany  
 SOURCE: Molecular Biology Intelligence Unit (2002),  
 24(Caspases--Their Role in Cell Death and Cell  
 Survival), 211-219  
 CODEN: MBIUF8; ISSN: 1431-0414  
 PUBLISHER: Landes Bioscience  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 18 Aug 2003  
 AB Caspases (Cysteine-Aspart-ases) are important effector mols. involved in  
 apoptosis, though some of them can also participate in other physiol.  
 processes such as activation of pro-inflammatory cytokines and/or possibly  
 regulation of cell activation and proliferation. Several methods to detect  
 caspases as well as caspase activity in cells and cell exts. are described.  
 The exptl. methods described include detection of caspase activation by

Western blot; fluorescent measurement of caspase activity in intact cells; and detection of caspase activity in cell exts.

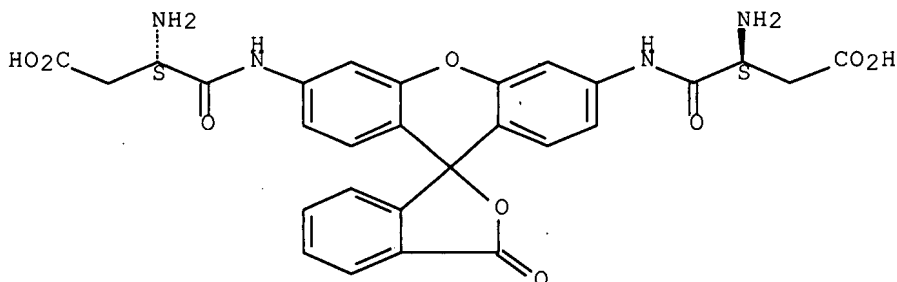
IT 220846-62-8

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(other methods of caspase activity monitoring)

RN 220846-62-8 CAPLUS

CN Butanoic acid, 4,4'-[(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)diimino]bis[3-amino-4-oxo-, (3S,3'S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:872656 CAPLUS Full-text

DOCUMENT NUMBER: 134:190200

TITLE: Design and synthesis of Rhodamine 110 derivative and Caspase-3 substrate for enzyme and cell-based fluorescent assay

AUTHOR(S): Cai, S. X.; Zhang, H.-Z.; Guastella, J.; Drewe, J.; Yang, W.; Weber, E.

CORPORATE SOURCE: Maxim Pharmaceuticals, San Diego, CA, 92121, USA

SOURCE: Bioorganic & Medicinal Chemistry Letters (2000), Volume Date 2001, 11(1), 39-42  
CODEN: BMCLE8; ISSN: 0960-894X

PUBLISHER: Elsevier Science Ltd.

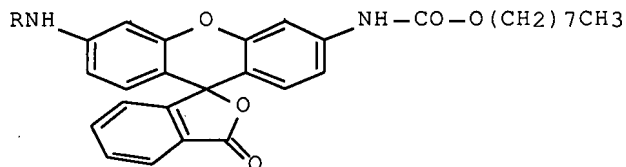
DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 134:190200

ED Entered STN: 13 Dec 2000

GI



I

AB N-Octyloxycarbonyl-R110, I (R = H), with enhanced cell penetration and retention properties, was prepared from rhodamine 110 (R110). Its tetrapeptide derivative, N-Ac-DEVD-N'-octyloxycarbonyl-R110, I (R = MeCO-Asp-

Glu-Val-Asp-), was prepared and shown to be efficiently cleaved by human recombinant caspase-3 and by apoptotic HL-60 cells. Thus, it should prove useful in cell-based assays for apoptosis inducers and inhibitors.

IT 223538-80-5P

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

(preparation of a peptide derivative of Rhodamine 110 as a caspase-3 substrate

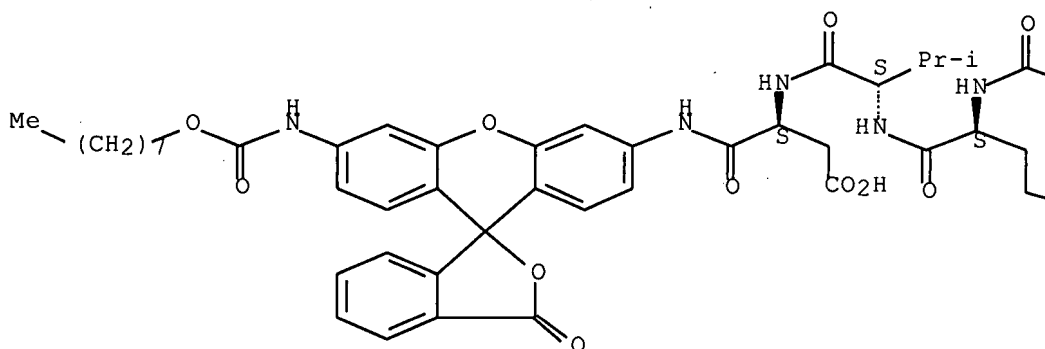
useful for enzyme and cell-based fluorescent assays)

RN 223538-80-5 CAPLUS

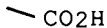
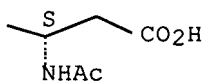
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[[(octyloxy)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:139993 CAPLUS Full-text

DOCUMENT NUMBER: 130:206981

TITLE: Method and enzyme-cleavable fluorogenic reagent for monitoring apoptosis and distinguishing apoptosis from necrosis

INVENTOR(S): Landrum, Eileen; Galiounghi, Adry; Garcia, Nancy; Del Valle, Ursino; Lucas, Frank

PATENT ASSIGNEE(S): Coulter International Corp., USA

SOURCE: PCT Int. Appl., 63 pp.



CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 5  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9909208	A1	19990225	WO 1998-US16832	19980813
W: JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5976822	A	19991102	US 1997-915414	19970820
PRIORITY APPLN. INFO.:			US 1997-915414	A 19970820
			US 1995-444051	A2 19950518

ED Entered STN: 04 Mar 1999

AB The ability to determine the stage or pathway of cysteine proteases in a single cell assay has long been desired as a material event in apoptosis. The present invention relates to a method and assay reagents for determining enzyme activity and relating said activity to the apoptotic pathway. In addition, the method finds utility in distinguishing apoptotic activity from necrotic activity. Fluorescein dichloroacetate, (D)2Rho110.2TFA, (LL)2Rho110.2TFA, (VK)2Rho110.2TFA, (FR)2Rho110.2TFA, and (DEVD)2Rho110.2TFA were used to compare enzymes associated in Jurkat cell apoptosis with those in inflammatory necrotic response.

IT 220846-81-1P

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses) (method and enzyme-cleavable fluorogenic reagent for monitoring apoptosis and distinguishing apoptosis from necrosis)

RN 220846-81-1 CAPLUS

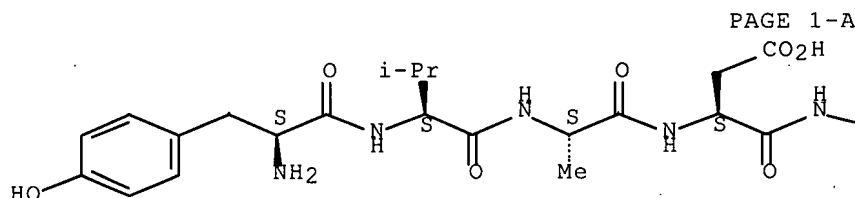
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-tyrosyl-L-valyl-L-alanyl-, bis(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

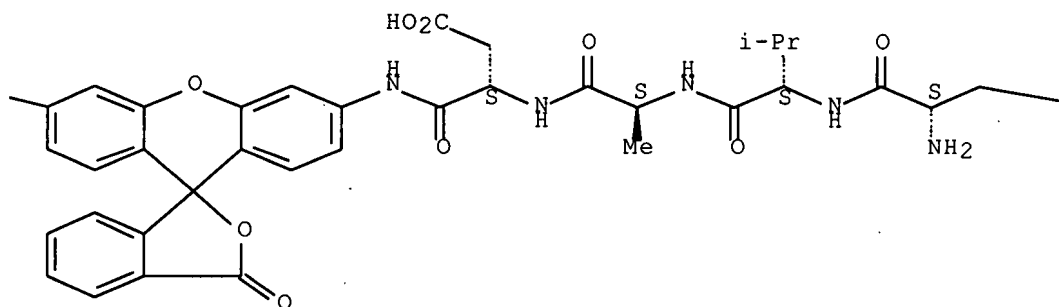
CRN 220846-80-0

CMF C62 H70 N10 O17

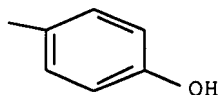
Absolute stereochemistry.



PAGE 1-B



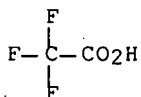
PAGE 1-C



CM 2

CRN 76-05-1

CMF C2 H F3 O2



IT 220846-63-9 220846-76-4

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)

(method and enzyme-cleavable fluorogenic reagent for monitoring apoptosis and distinguishing apoptosis from necrosis)

RN 220846-63-9 CAPLUS

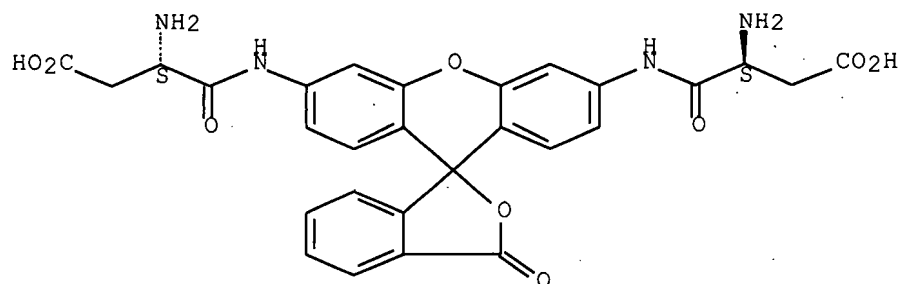
CN Butanoic acid, 4,4'-[(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)diimino]bis[3-amino-4-oxo-, (3S,3'S)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 220846-62-8

CMF C28 H24 N4 O9

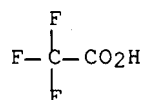
Absolute stereochemistry.



CM 2

CRN 76-05-1

CMF C2 H F3 O2



RN 220846-76-4 CAPLUS

CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-  
, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

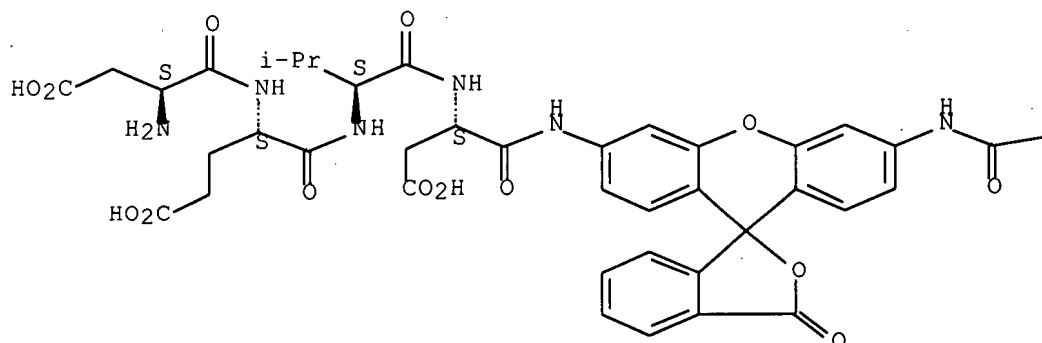
CM 1

CRN 220846-75-3

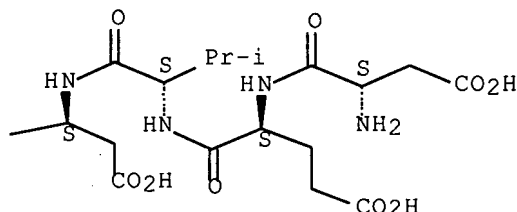
CMF C56 H66 N10 O23

Absolute stereochemistry.

PAGE 1-A



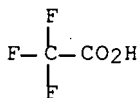
PAGE 1-B



CM 2

CRN 76-05-1

CMF C2 H F3 O2



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:629519 CAPLUS Full-text

DOCUMENT NUMBER: 132:10268

TITLE: Rhodamine 110-Linked Amino Acids and Peptides as Substrates To Measure Caspase Activity upon Apoptosis Induction in Intact Cells

AUTHOR(S): Hug, Hubert; Los, Marek; Hirt, Werner; Debatin, Klaus-Michael

CORPORATE SOURCE: Universitaets-Kinderklinik Ulm, Ulm, D-89075, Germany

SOURCE: Biochemistry (1999), 38(42), 13906-13911

CODEN: BICHAW; ISSN: 0006-2960

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 05 Oct 1999

AB Caspases (cysteine aspartate-specific proteases) are a structurally related group of cysteine proteases that cleave peptide bonds following specific recognition sequences. They play a central role in activating apoptosis of vertebrate cells. To measure apoptosis induced by various stimuli and at an early apoptotic stage, caspases are an ideal target. This is especially the case when apoptotic cells have to be analyzed ex vivo before phagocytes remove them. A new and sensitive caspase assay is based on a substrate that contains only aspartate residues linked to rhodamine 110. With this and similar substrates, we are able to detect intracellular caspase activation by flow cytometry after apoptosis induction in intact hematopoietic cell lines.

IT 224193-20-8 251358-33-5 251358-34-6

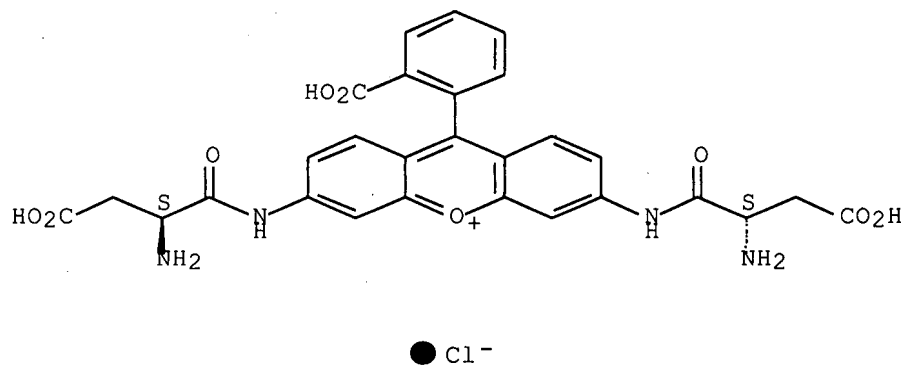
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)

(rhodamine 110-linked amino acids and peptides as substrates to measure caspase activity upon apoptosis induction in intact cells)

RN 224193-20-8 CAPLUS

CN Benzoic acid, 2-[3,6-bis[[ (2S)-2-amino-3-carboxy-1-oxopropyl]amino]xanthylum-9-yl]-, chloride (9CI) (CA INDEX NAME)

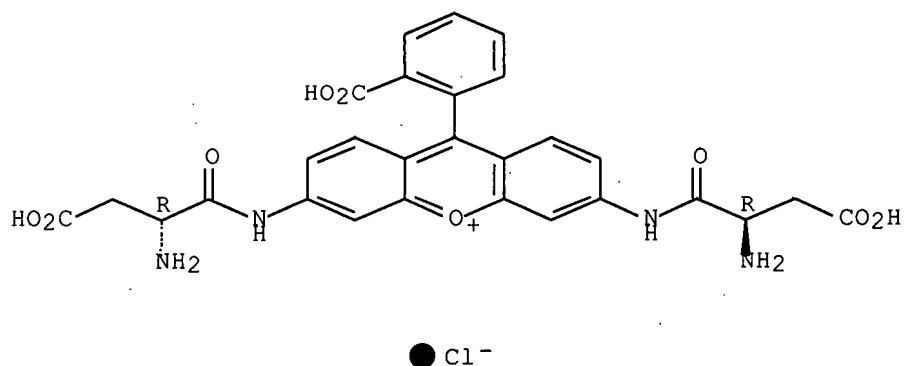
Absolute stereochemistry.



RN 251358-33-5 CAPLUS

CN Xanthylum, 3,6-bis[[ (2R)-2-amino-3-carboxy-1-oxopropyl]amino]-9-(2-carboxyphenyl)-, chloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

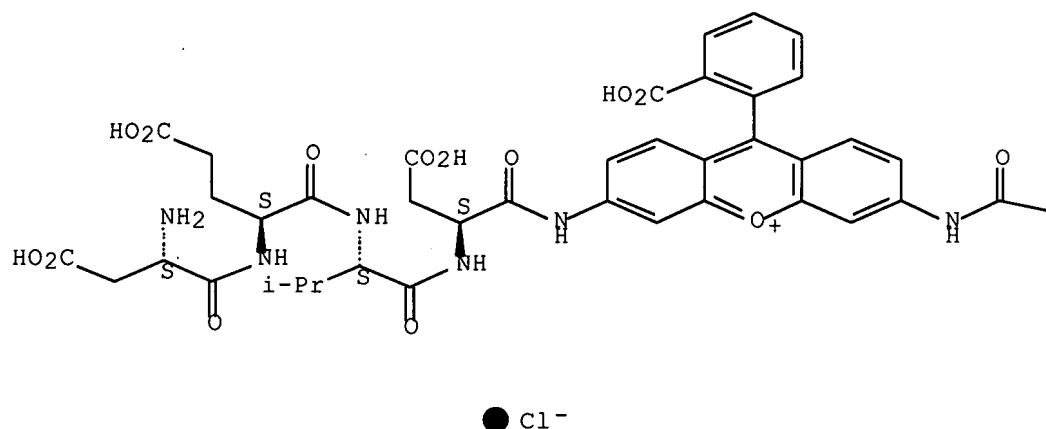


RN 251358-34-6 CAPLUS

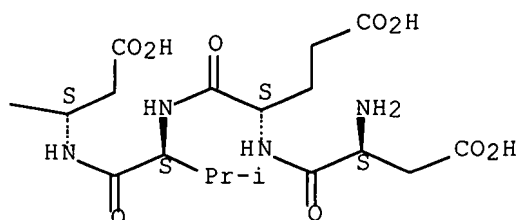
CN L-α-Asparagine, 4,4'-[9-(2-carboxyphenyl)xanthylum-3,6-diyl]bis[L-α-aspartyl-L-α-glutamyl-L-valyl]-, chloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:769087 CAPLUS Full-text

DOCUMENT NUMBER: 132:104476

TITLE: Fluorescent molecular probes V: a sensitive caspase-3 substrate for fluorometric assays

AUTHOR(S): Liu, Jixiang; Bhalgat, Mahesh; Zhang, Cailan; Diwu, Zhenjun; Hoyland, Brian; Klaubert, Dieter H.

CORPORATE SOURCE: Molecular Probes, Inc., Eugene, OR, 97402, USA

SOURCE: Bioorganic & Medicinal Chemistry Letters (1999), 9(22), 3231-3236

CODEN: BMCLE8; ISSN: 0960-894X

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 132:104476

ED Entered STN: 06 Dec 1999

AB (Z-Asp-Glu-Val-Asp)<sub>2</sub>-Rhodamine 110 [(Z-DEVD)<sub>2</sub>-Rh 110] was prepared and characterized as a sensitive fluorogenic substrate for the determination of caspase-3 activity.

IT 223538-61-2P

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

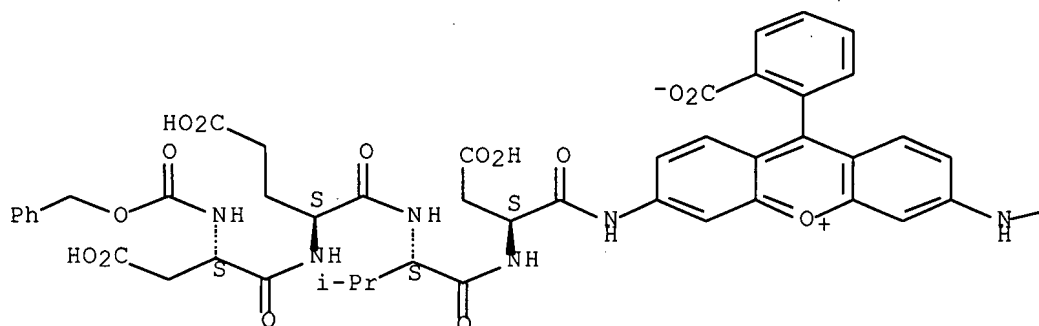
(preparation of a sensitive caspase-3 substrate for fluorometric assays)

RN 223538-61-2 CAPLUS

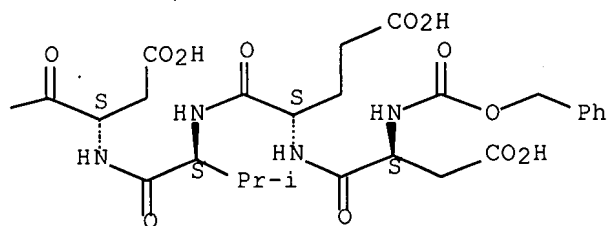
CN L- $\alpha$ -Asparagine, 4,4'-[9-(2-carboxyphenyl)xanthylium-3,6-diyl]bis[N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:103922 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 130:335674

TITLE: Localization of enzymes in live spermatozoa by CellProbe reagents (preliminary results)

AUTHOR(S): Glander, H.-J.; Schaller, J.

CORPORATE SOURCE: Department of Dermatology/Andrology Unit, University of Leipzig, Leipzig, D-04103, Germany

SOURCE: Andrologia (1999), 31(1), 37-42

CODEN: ANDRDQ; ISSN: 0303-4569

PUBLISHER: Blackwell Wissenschafts-Verlag GmbH  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

ED Entered STN: 16 Feb 1999

AB As a new approach, various synthetic fluorogenic substrates, the CellProbe reagents, were applied to examine the topog. of their cleavage in vital human spermatozoa. These substrates are able to enter the cells without requiring previous cell permeabilization and can produce a fluorescent dye after cleavage, depending on enzyme activity. Vital spermatozoa from samples with normal spermogram parameters showed fluorescence in different areas and intensity after incubation with a variety of substrates for aminopeptidase A, peroxides, subtilisin, dipeptidylpeptidase IV (DPP IV), cathepsin D, glucosidase and glucuronidase, but not with the substrate for galactosidase. Fluorescence was mainly located in the acrosomal cap (substrates for DPP IV, subtilisin, cathepsin D, glucosidase and glucuronidase) in the middle piece and head (substrates for peroxides, glucosidase), in the sperm head (substrates for aminopeptidase A) and occasionally in the tail (substrate for glucosidase). The substrate for subtilisin may play a role in androl., because subtilisin is a serine protease like acrosin. This substrate may possibly be used to determine the acrosin activity in vital spermatozoa. The CellProbe reagents for fluorescence cytoenzymol. may serve advanced methods in both clin. androl. and spermiol. research, presuming that the characteristics and qualities of the synthetic substrates are correct. Therefore, more extended studies will be necessary to determine their clin. utility and significance under physiol. and pathol. conditions.

IT 224193-20-8

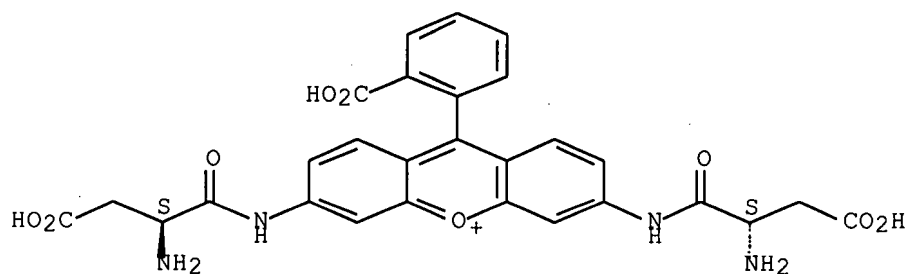
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)

(localization of enzymes in live spermatozoa by using fluorogenic substrates called CellProbe reagents)

RN 224193-20-8 CAPLUS

CN Benzoic acid, 2-[3,6-bis[[[(2S)-2-amino-3-carboxy-1-oxopropyl]amino]xanthylum-9-yl]-, chloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

● Cl<sup>-</sup>

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 15 OF 16 USPATFULL on STN

ACCESSION NUMBER: 2005:177226 USPATFULL Full-text

TITLE: Fluorogenic enzyme substrates and uses thereof



INVENTOR(S): Harris, Jennifer L., San Diego, CA, UNITED STATES  
Damoiseaux, Robert, Escondido, CA, UNITED STATES  
Backes, Bradley J., Chicago, IL, UNITED STATES  
Winssinger, Nicolas, La Jolla, CA, UNITED STATES  
PATENT ASSIGNEE(S): IRM LLC, Hamilton, BERMUDA (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2005153306	A1	20050714	
APPLICATION INFO.:	US 2004-892402	A1	20040714	(10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-487464P	20030714 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US	
NUMBER OF CLAIMS:	68	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	12 Drawing Page(s)	
LINE COUNT:	2860	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides, inter alia, fluorogenic enzyme substrates, such as fluorogenic polypeptide substrates, libraries of fluorogenic enzyme substrates and methods for assaying for enzymatically active enzymes, such as hydrolases (e.g., proteases), in biological samples.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

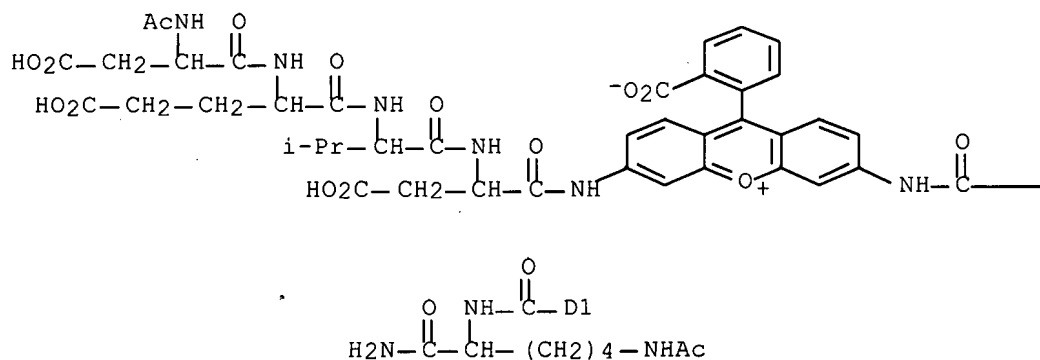
IT 832105-72-3P

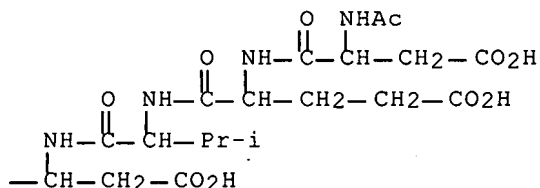
(enzyme substrates containing fluorogenic and enzyme-cleavable moieties and PNA identifier tag, arrays of said substrates, and methods for detecting biol. pathway activation)

RN 832105-72-3 USPATFULL

CN L- $\alpha$ -Asparagine, 4,4'-[9-[4(or 5)-[[[(1S)-5-(acetylamino)-1-(aminocarbonyl)pentyl]amino]carbonyl]-2-carboxyphenyl]xanthylium-3,6-diyl]bis[N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A





L45 ANSWER 16 OF 16 USPATFULL on STN

ACCESSION NUMBER: 2002:1317 USPATFULL Full-text

TITLE: Fluorogenic or fluorescent reporter molecules and their applications for whole-cell fluorescence screening assays for caspases and other enzymes and the use thereof

INVENTOR(S): Cai, Sui Xiong, San Diego, CA, United States  
Keana, John F. W., Eugene, OR, United States  
Drewe, John A., Costa Mesa, CA, United States  
Zhang, Han-Zhong, Irvine, CA, United States

PATENT ASSIGNEE(S): Cytovia, Inc., San Diego, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6335429	B1	20020101
APPLICATION INFO.:	US 2000-521650		20000308 (9)
RELATED APPLN. INFO.:	Division of Ser. No. US 1998-168888,		filed on 9 Oct 1998

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-145746P	19980303 (60)
	US 1997-61582P	19971010 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Ceperley, Mary E.	
LEGAL REPRESENTATIVE:	Sterne, Kessler, Goldstein & Fox P.L.L.C.	
NUMBER OF CLAIMS:	18	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	28 Drawing Figure(s); 12 Drawing Page(s)	
LINE COUNT:	4329	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel fluorescent dyes, novel fluorogenic and fluorescent reporter molecules and new enzyme assay processes that can be used to detect the activity of caspases and other enzymes involved in apoptosis in whole cells, cell lines and tissue samples derived from any living organism or organ. The reporter molecules and assay processes can be used in drug screening procedures to identify compounds which act as inhibitors or inducers of the caspase cascade in whole cells or tissues. The reagents and assays described herein are also useful for determining the chemosensitivity of human cancer cells to treatment with chemotherapeutic drugs. The present invention also relates to novel fluorogenic and fluorescent reporter molecules and new enzyme assay processes that can be used to detect the activity of type 2 methionine aminopeptidase, dipeptidyl peptidase IV, calpain, aminopeptidase, HIV protease, adenovirus protease, HSV-1 protease, HCMV protease and HCV protease.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 220846-75-3DP, N-blocked 220846-80-0DP, N-blocked  
 223538-39-4DP, N-blocked 223538-40-7DP, N-blocked  
 223538-41-8DP, N-blocked 223538-42-9DP, N-blocked  
 223538-43-0DP, N-blocked 223538-44-1DP, N-blocked  
 223538-45-2DP, N-blocked 223538-46-3DP, N-blocked  
 223538-47-4DP, N-blocked 223538-48-5DP, N-blocked  
 223538-49-6DP, N-blocked 223538-50-9DP, N-blocked  
 223538-51-0DP, N-blocked 223538-52-1DP, N-blocked  
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 223538-55-4DP, N-blocked 223538-56-5DP, N-blocked  
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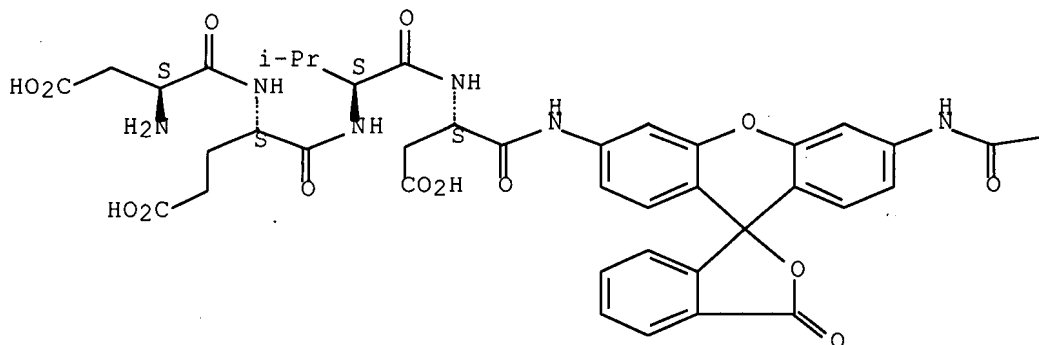
(novel fluorescent reporter mols. and their applications including assays for caspases)

RN 220846-75-3 USPATFULL

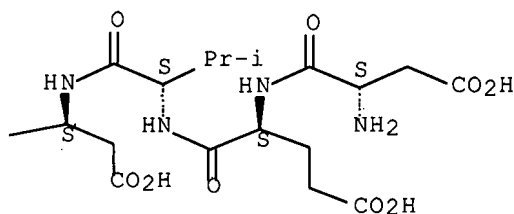
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



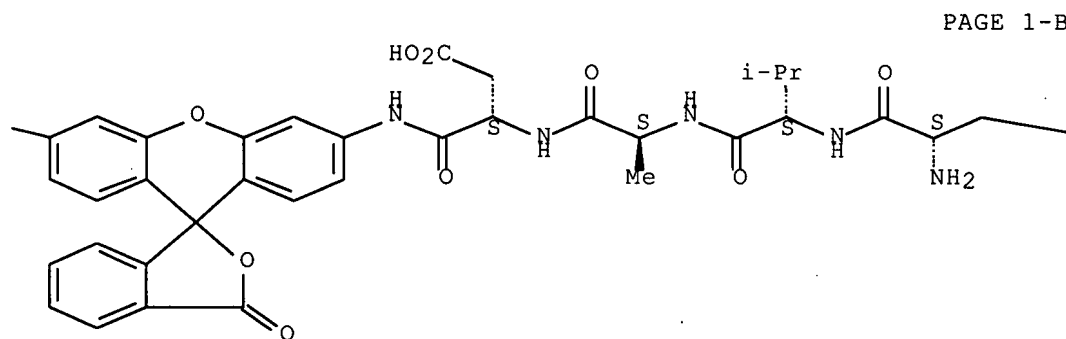
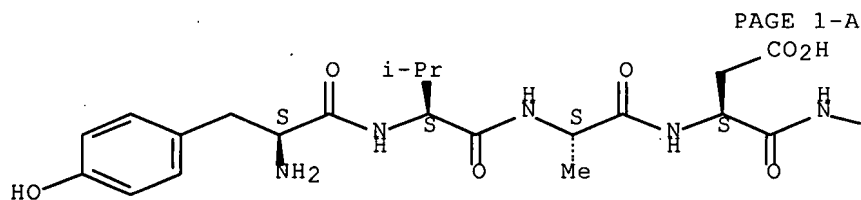
PAGE 1-B



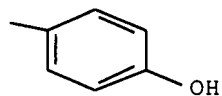
RN 220846-80-0 USPATFULL

CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
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INDEX NAME)

Absolute stereochemistry.



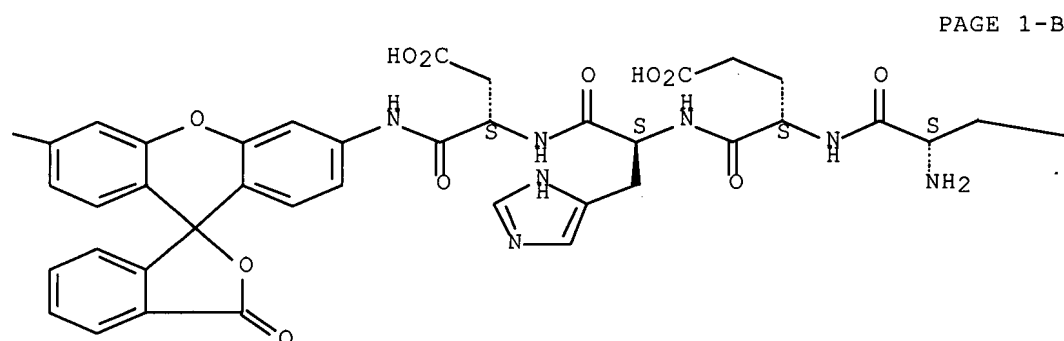
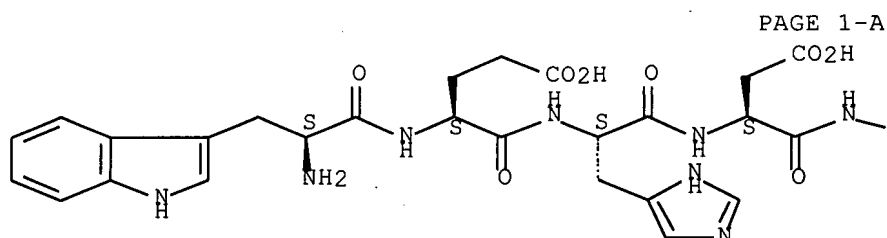
PAGE 1-C



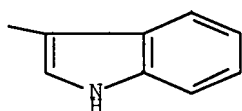
RN 223538-39-4 USPATFULL

CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-tryptophyl-L- $\alpha$ -glutamyl-L-histidyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



PAGE 1-C

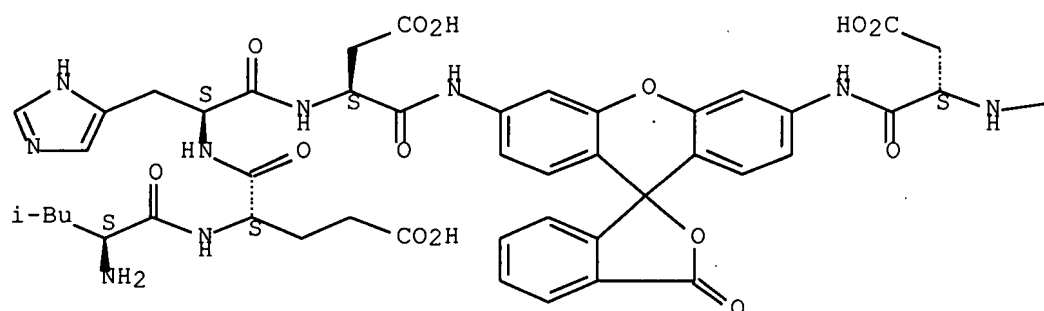


RN 223538-40-7 USPATFULL

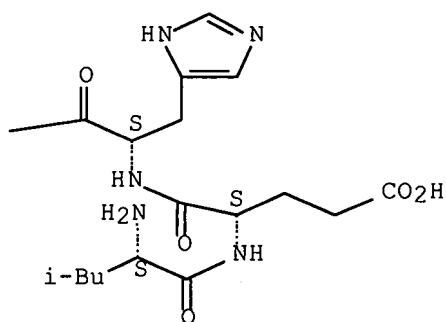
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-leucyl-L- $\alpha$ -glutamyl-L-histidyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

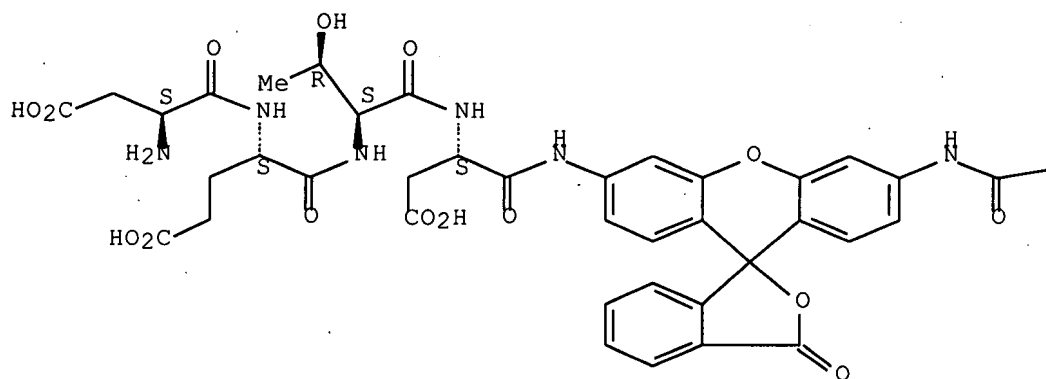


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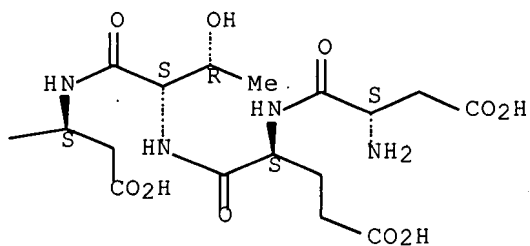
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-  
threonyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

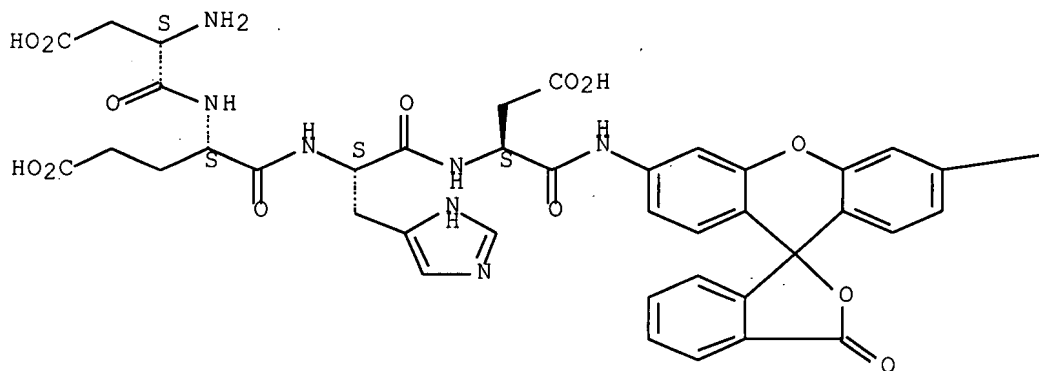


RN 223538-42-9 USPATFULL

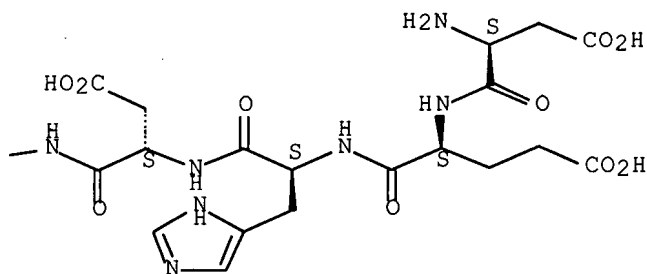
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-histidyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



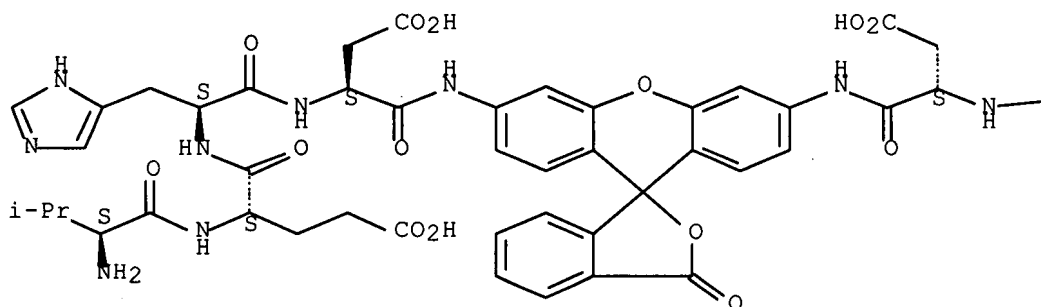
RN 223538-43-0 USPATFULL

CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-valyl-L- $\alpha$ -glutamyl-L-histidyl-

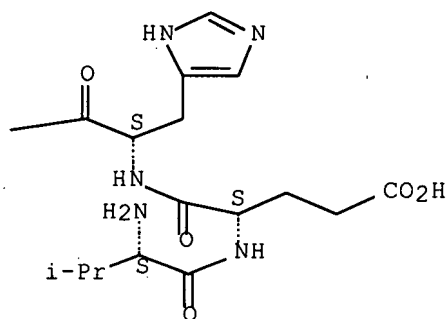
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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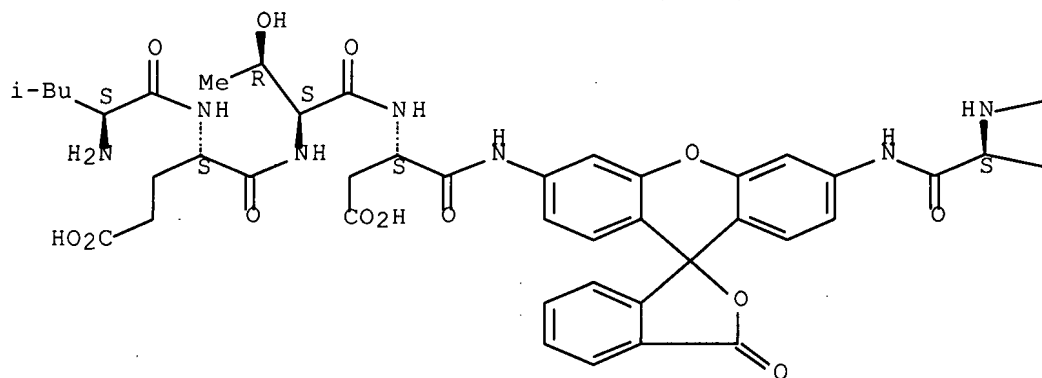
RN 223538-44-1 USPATFULL

CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-(9H)xanthene]-3',6'-diyl)bis[L-leucyl-L- $\alpha$ -glutamyl-L-threonyl-  
(9CI) (CA INDEX NAME)

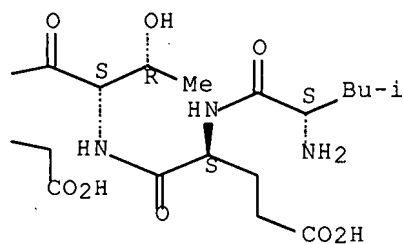
Absolute stereochemistry.



PAGE 1-A



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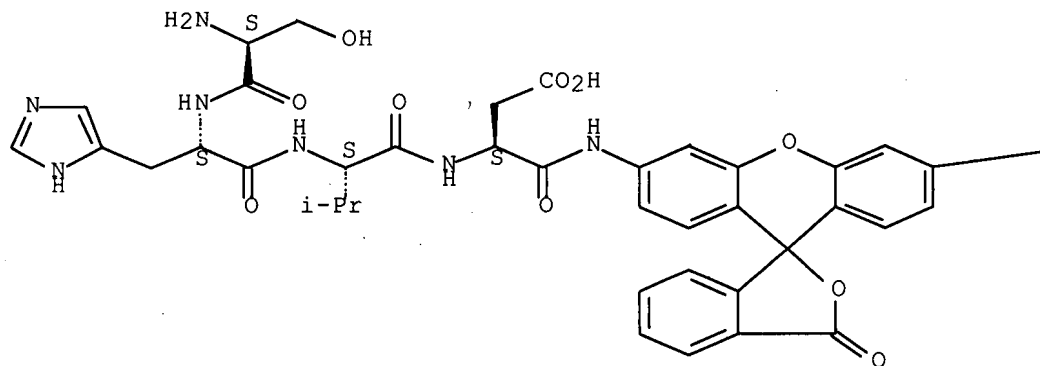


RN 223538-45-2 USPATFULL

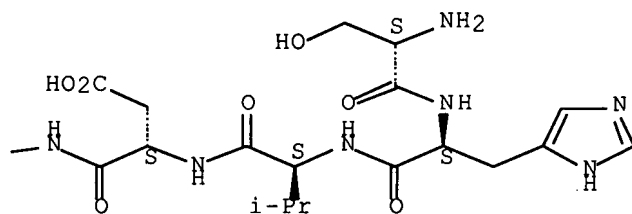
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-seryl-L-histidyl-L-valyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

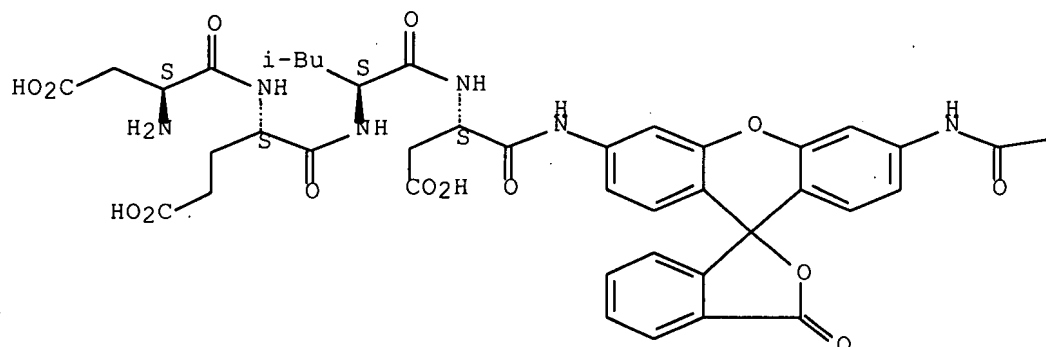


RN 223538-46-3 USPATFULL

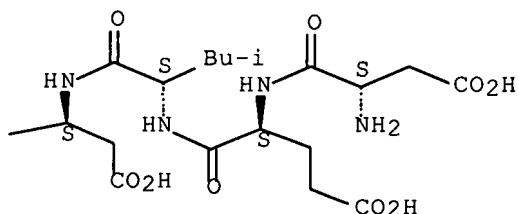
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-α-aspartyl-L-α-glutamyl-L-  
leucyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

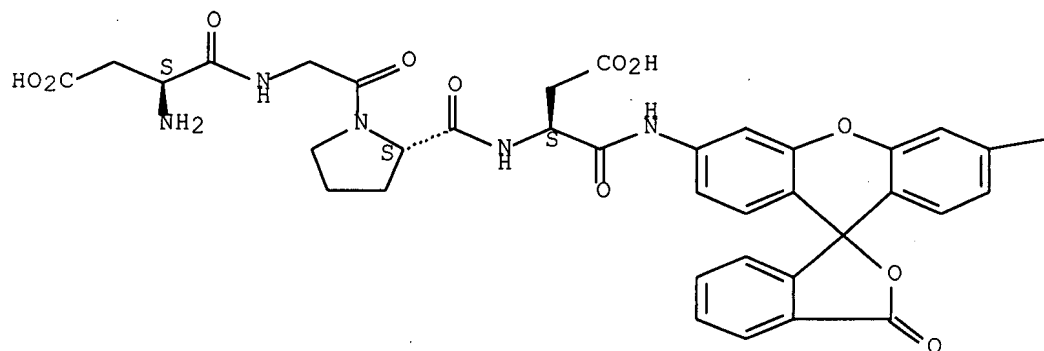


RN 223538-47-4 USPATFULL

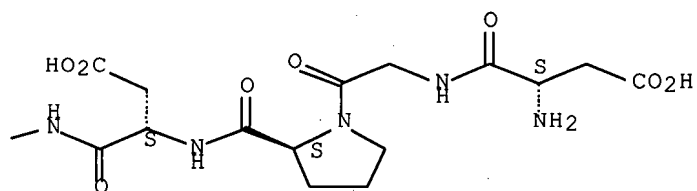
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-α-aspartylglycyl-L-prolyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

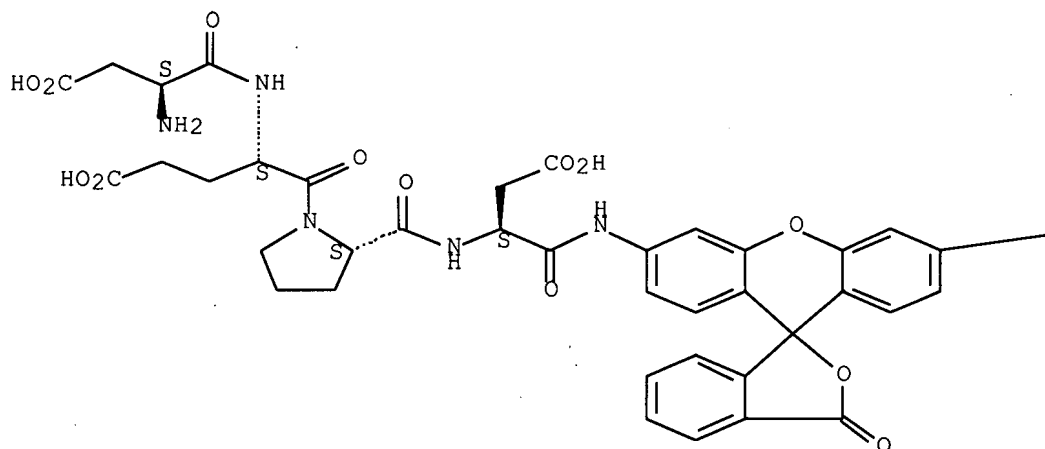


RN 223538-48-5 USPATFULL

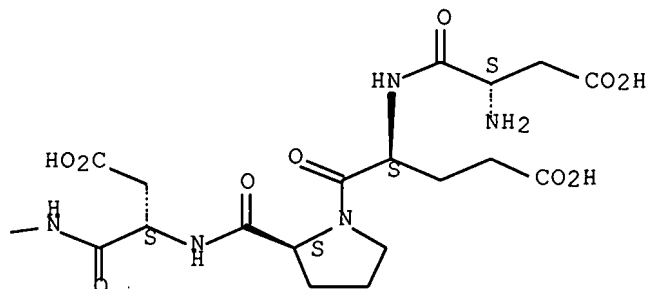
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-α-aspartyl-L-α-glutamyl-L-prolyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

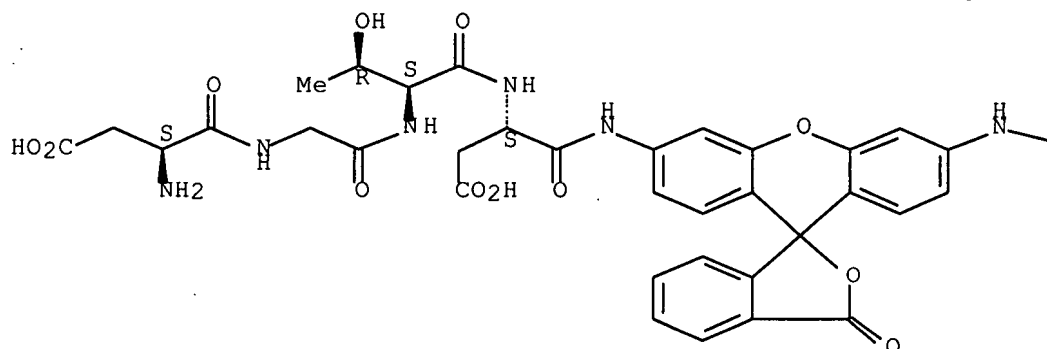


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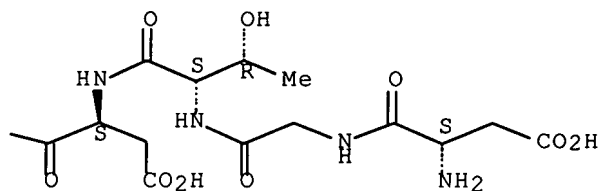
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-α-aspartylglycyl-L-threonyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

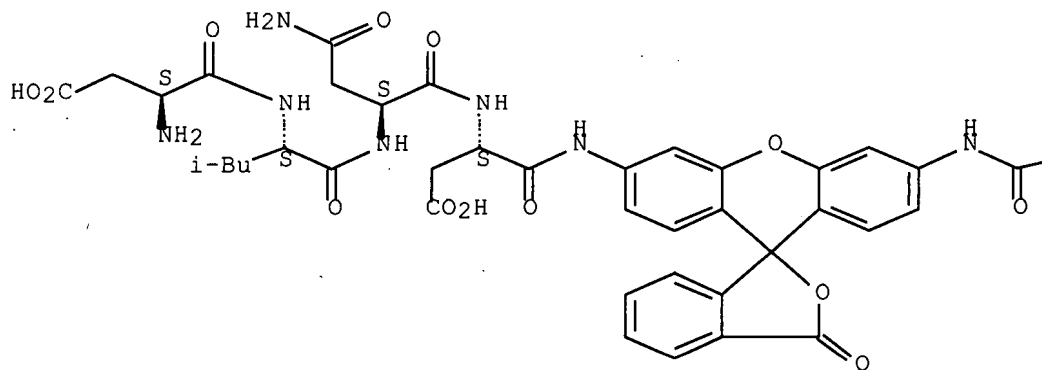


RN 223538-50-9 USPATFULL

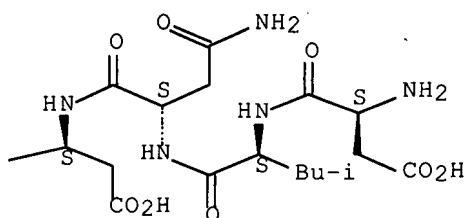
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-  
[9H]xanthene]-3',6'-diyl)bis[L-α-aspartyl-L-leucyl-L-asparaginyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

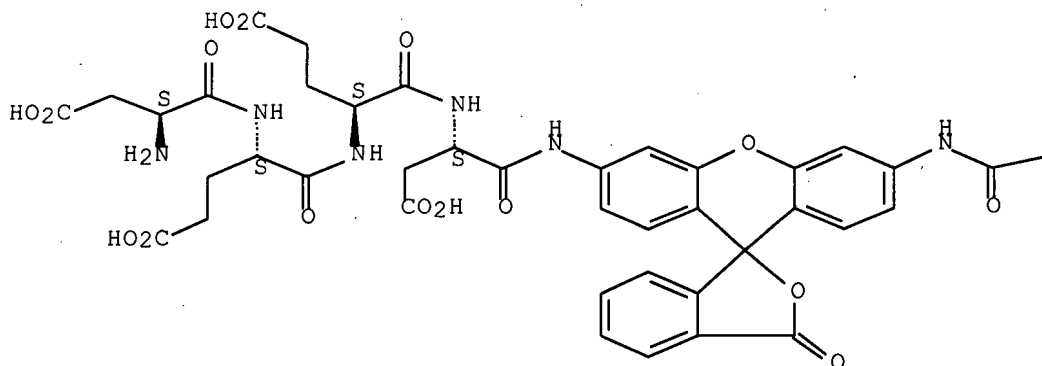


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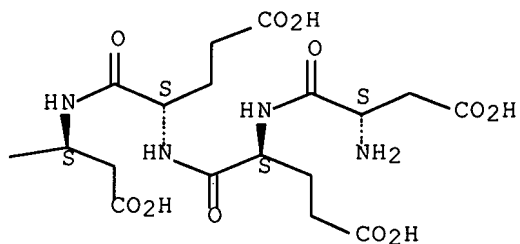
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L-α-aspartyl-L-α-glutamyl-L-α-glutamyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

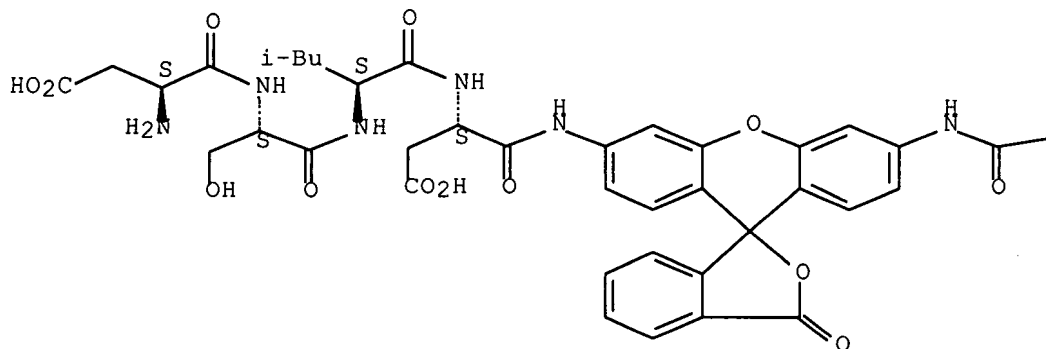


RN 223538-52-1 USPATFULL

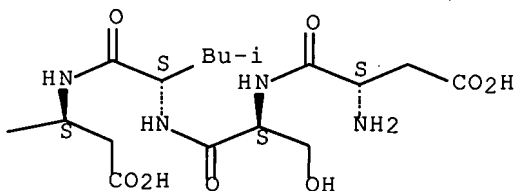
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-(9H)xanthene]-3',6'-diyl)bis[L-α-aspartyl-L-seryl-L-leucyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

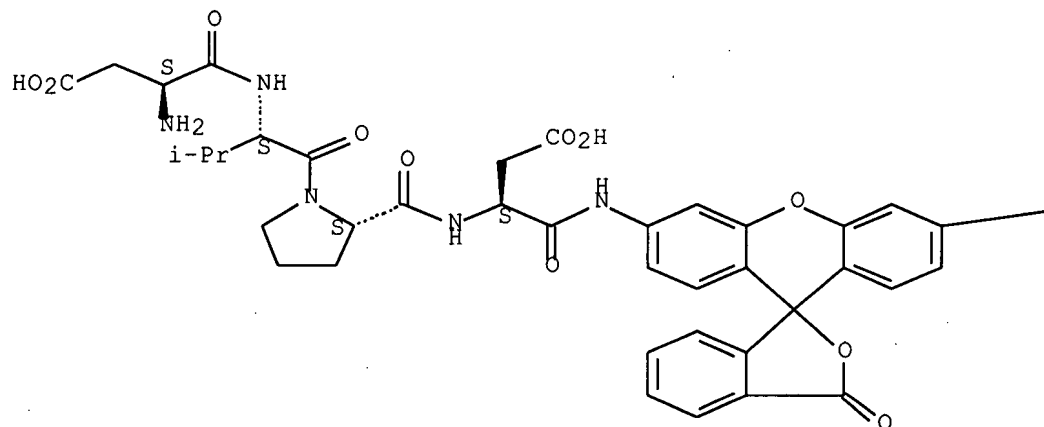


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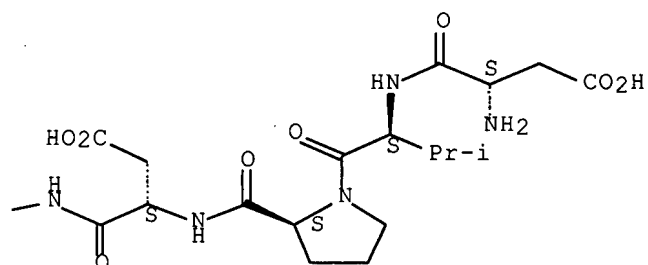
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-(9H)xanthene]-3',6'-diyl)bis[L-α-aspartyl-L-valyl-L-prolyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

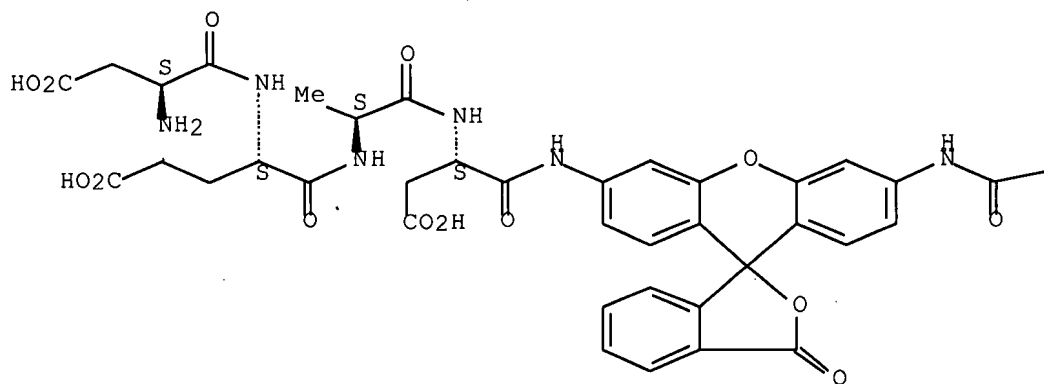


RN 223538-54-3 USPATFULL

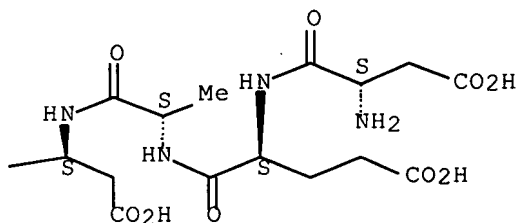
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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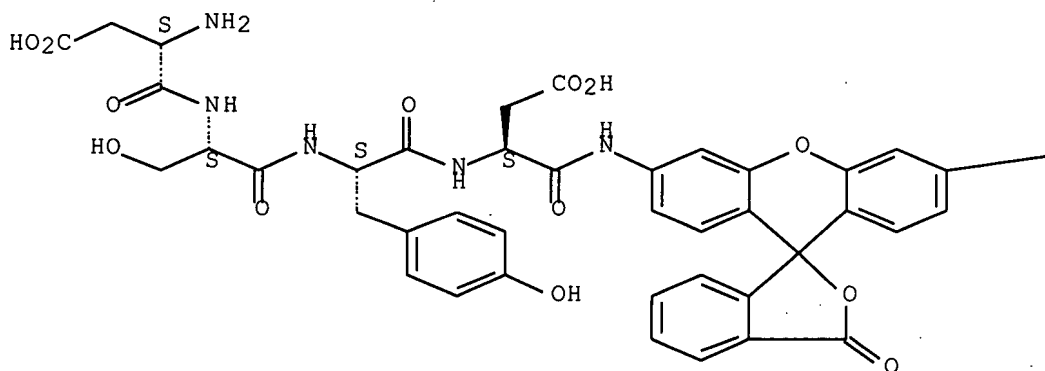


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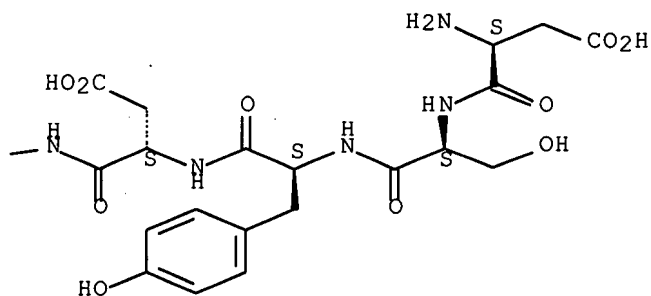
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L- $\alpha$ -aspartyl-L-seryl-L-tyrosyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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RN 223538-56-5 USPATFULL

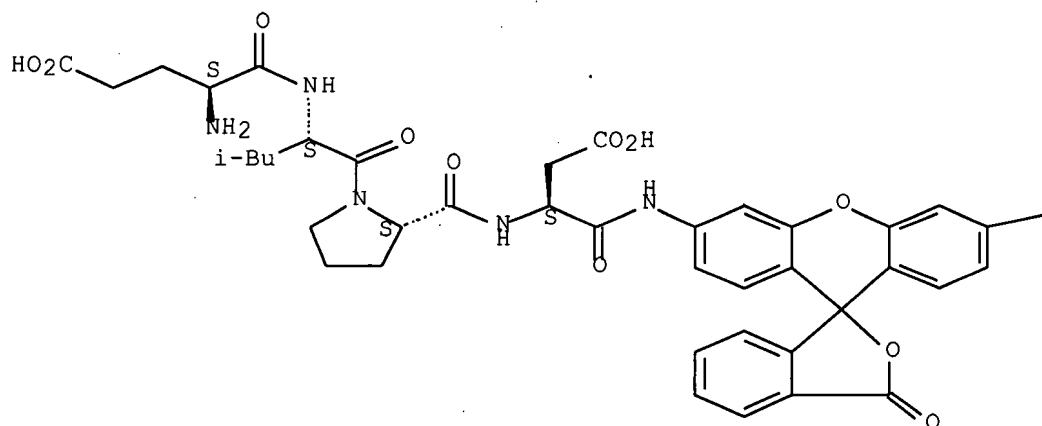
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[L- $\alpha$ -glutamyl-L-leucyl-L-prolyl- (9CI)



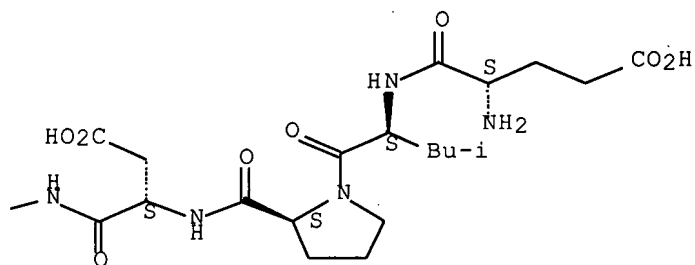
(CA INDEX NAME)

Absolute stereochemistry.

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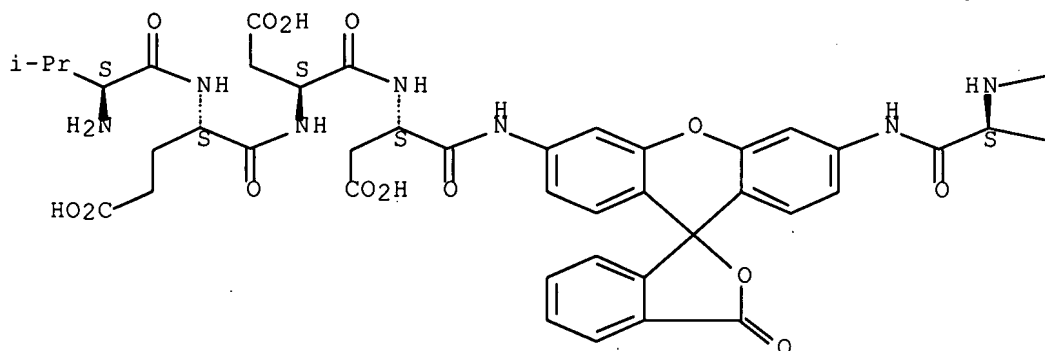


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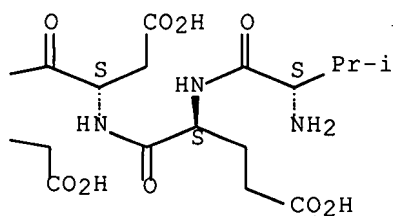
CN L-α-Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-(9H)xanthene]-3',6'-diyl)bis[L-valyl-L-α-glutamyl-L-α-aspartyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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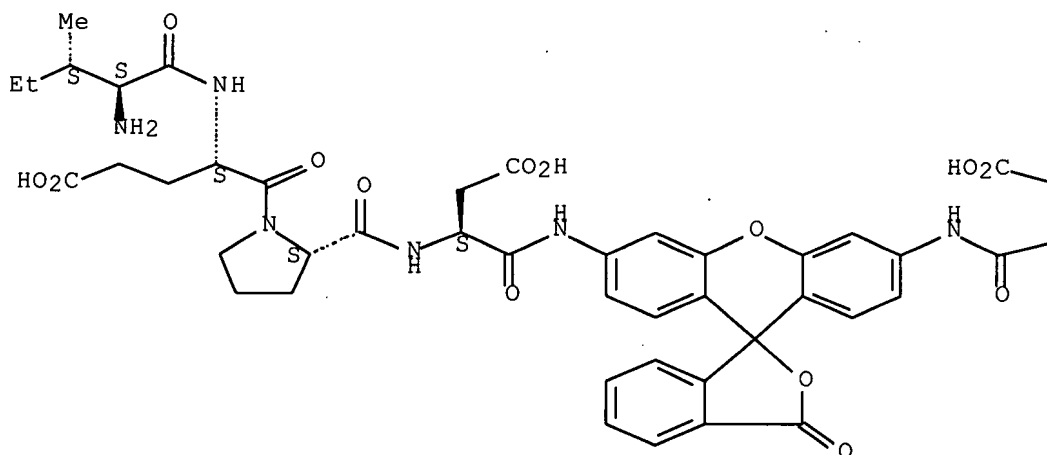


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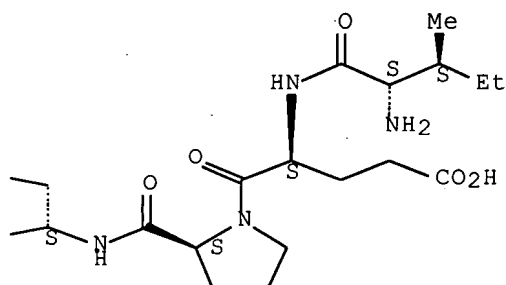
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-isoleucyl-L- $\alpha$ -glutamyl-L-prolyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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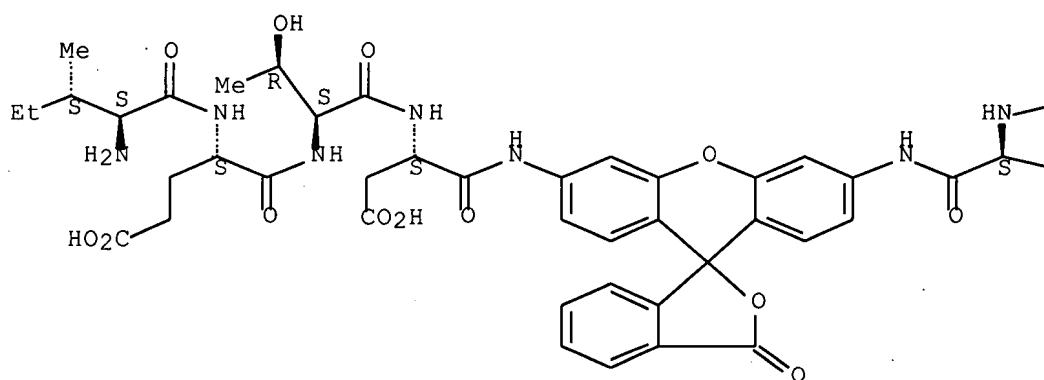


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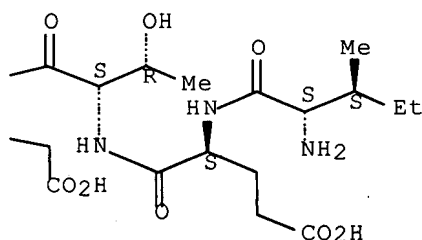
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[L-isoleucyl-L- $\alpha$ -glutamyl-L-threonyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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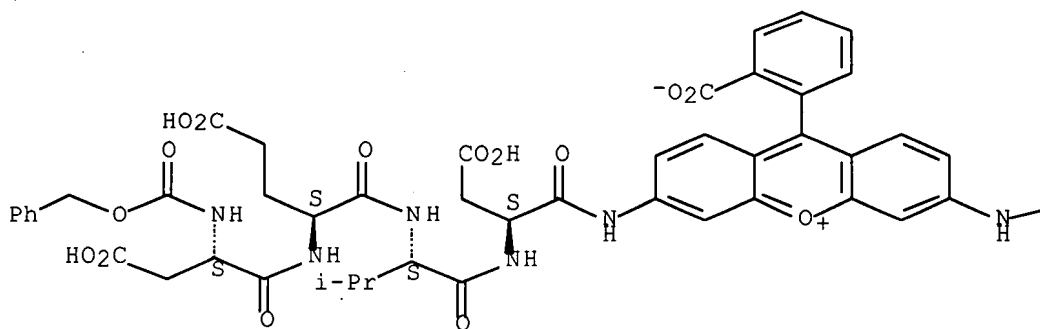


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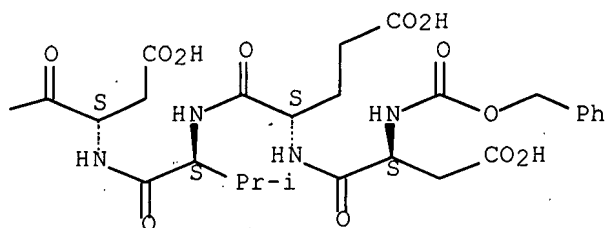
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[N-[(phenylmethoxy)carbonyl]-L-tyrosyl-L-valyl-L-alanyl- (9CI) (CA INDEX NAME)



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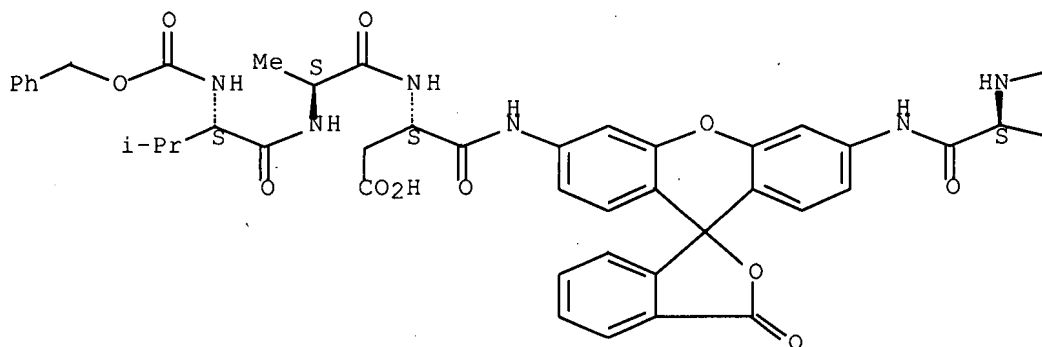


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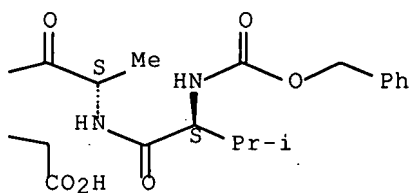
CN L- $\alpha$ -Asparagine, 3,3'-(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl)bis[N-[(phenylmethoxy)carbonyl]-L-valyl-L-alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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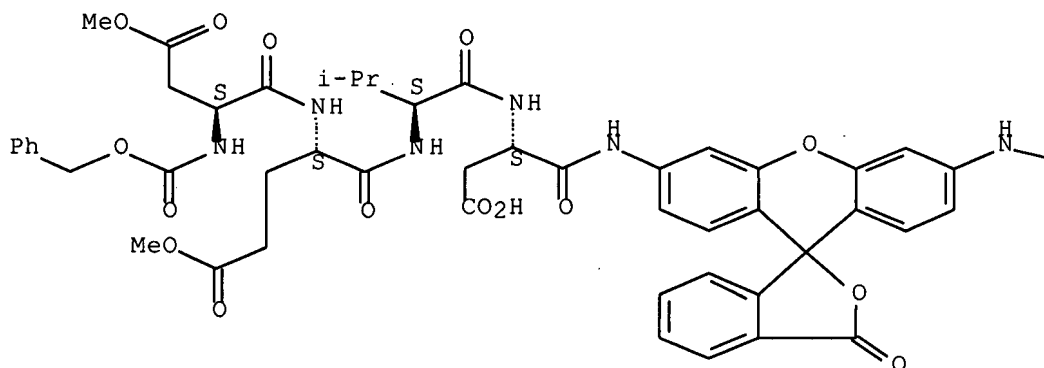


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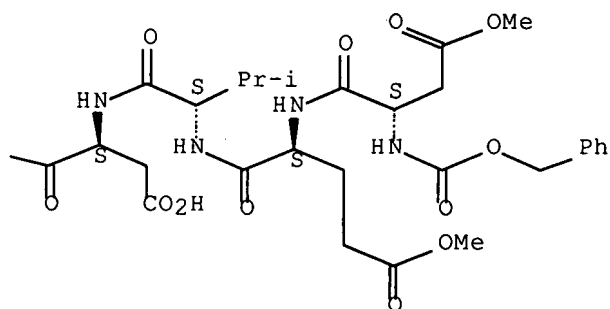
CN L- $\alpha$ -Asparagine, 4,4'-(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)bis[N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-, 1,1',2,2'-tetramethyl ester (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

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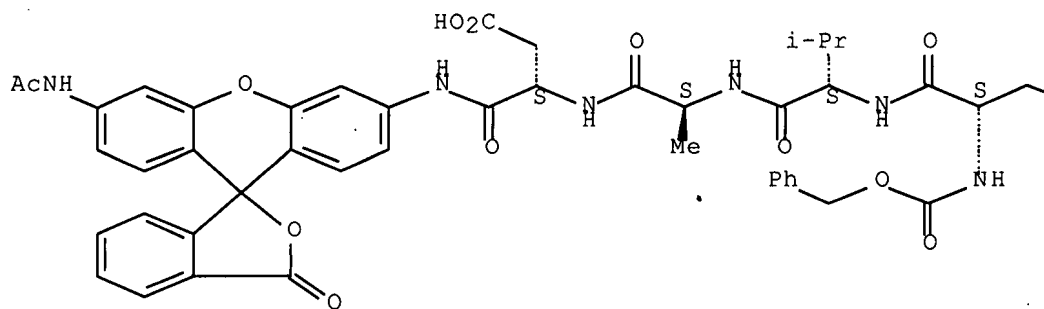


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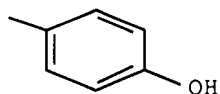
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-tyrosyl-L-valyl-L-alanyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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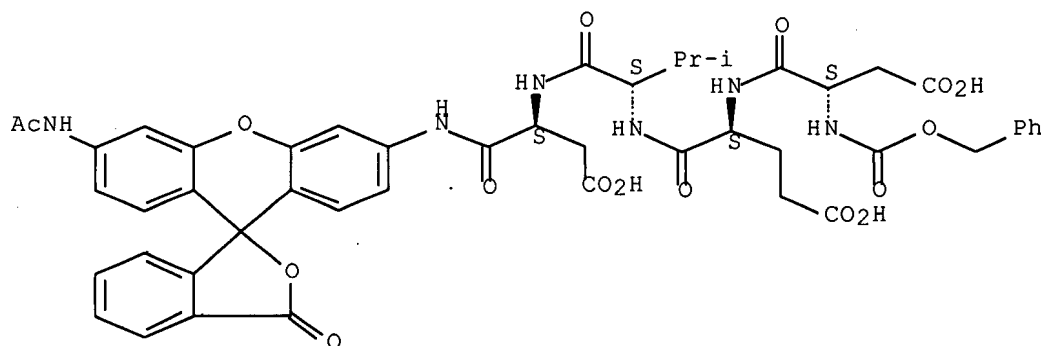
PAGE 1-B



RN 223538-73-6 USPATFULL

CN L-α-Asparagine, N-[(phenylmethoxy)carbonyl]-L-α-aspartyl-L-  
α-glutamyl-L-valyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-  
1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

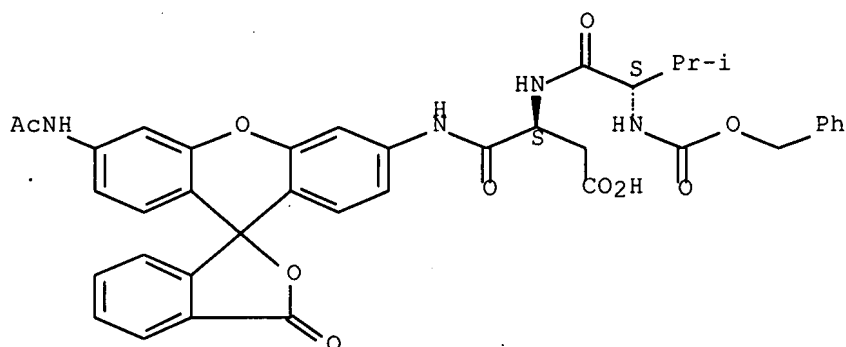
Absolute stereochemistry.



RN 223538-74-7 USPATFULL

CN L-α-Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-N-[6'-  
(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]-  
(9CI) (CA INDEX NAME)

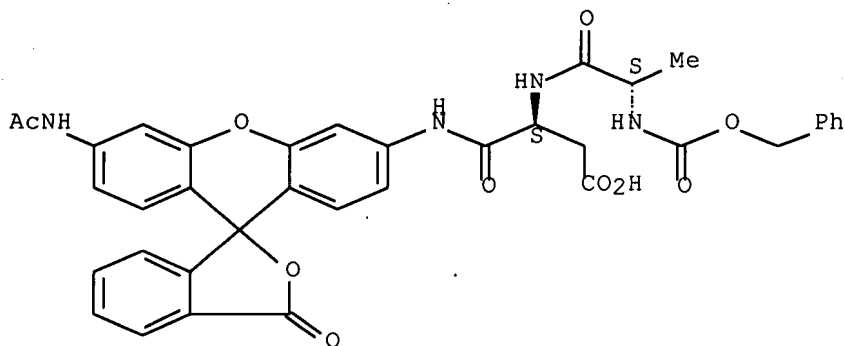
Absolute stereochemistry.



RN 223538-75-8 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-alanyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]-(9CI) (CA INDEX NAME)

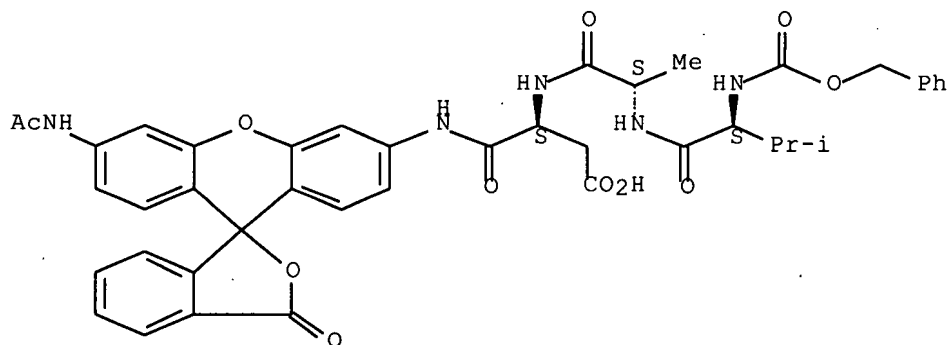
Absolute stereochemistry.



RN 223538-76-9 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-L-alanyl-N-[6'-(acetylamino)-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



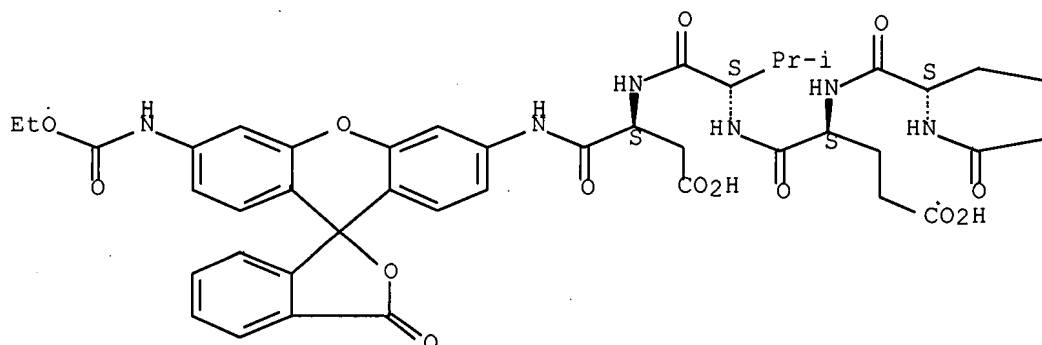
RN 223538-77-0 USPATFULL



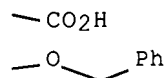
CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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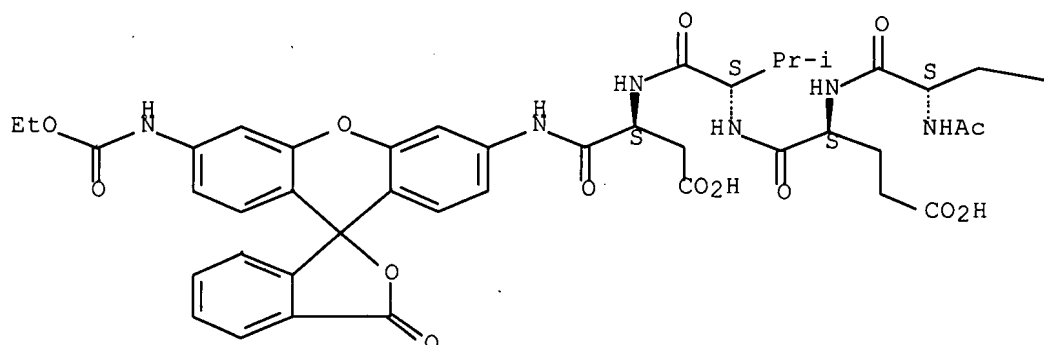


RN 223538-78-1 USPATFULL

CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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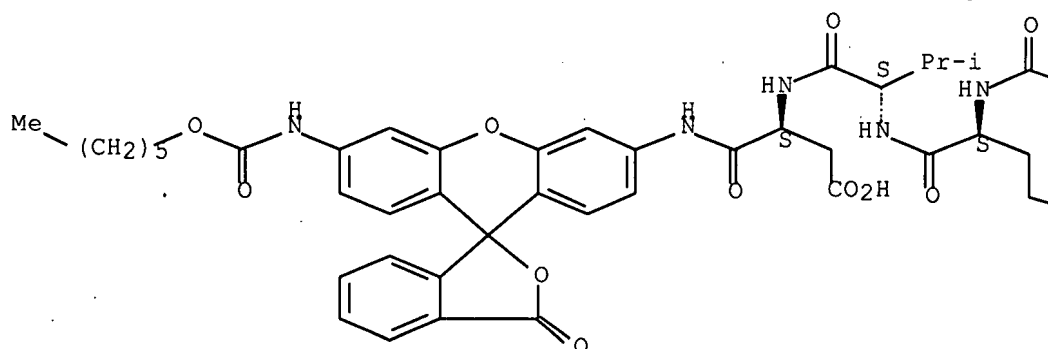
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RN 223538-79-2 USPATFULL

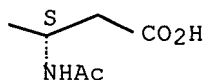
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[ (hexyloxy) carbonyl] amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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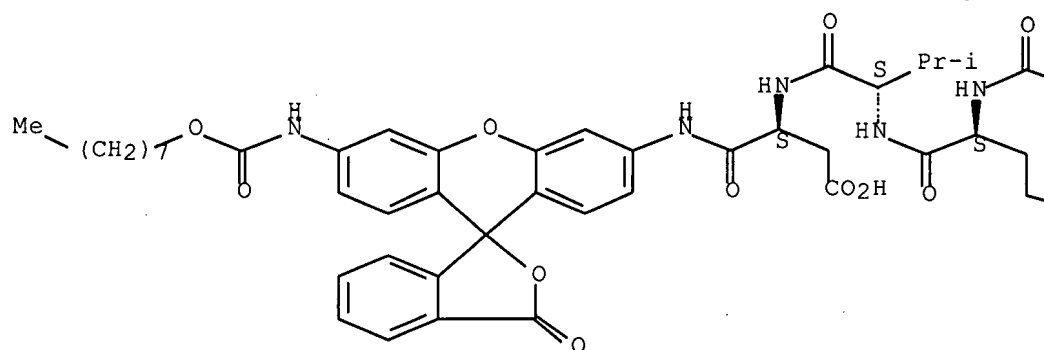
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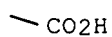
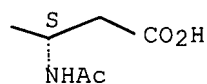
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[ (octyloxy) carbonyl] amino]-3-oxospiro{isobenzofuran-1(3H),9'-[9H]xanthen}-3'-yl)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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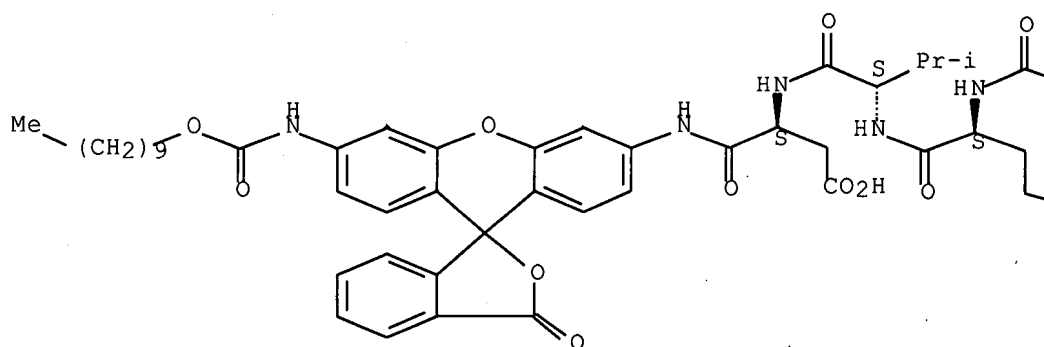


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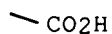
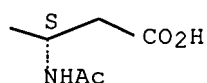
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[[(decyloxy)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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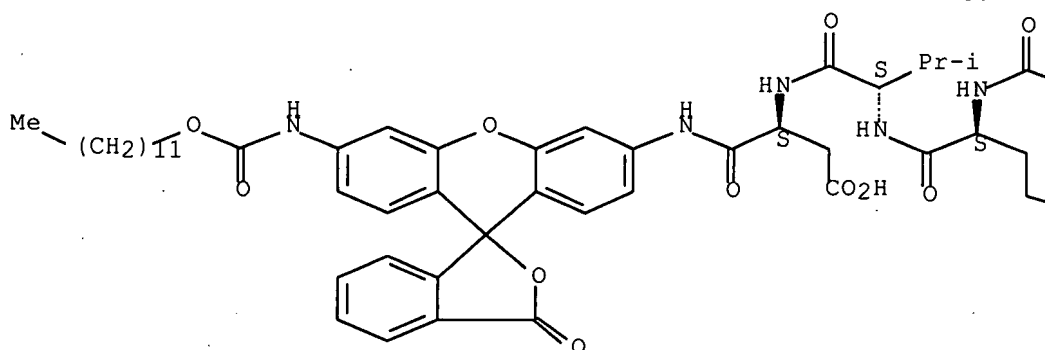


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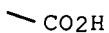
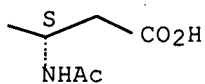
CN L- $\alpha$ -Asparagine, N-acetyl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-valyl-N-[6'-[[[(dodecyloxy)carbonyl]amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3'-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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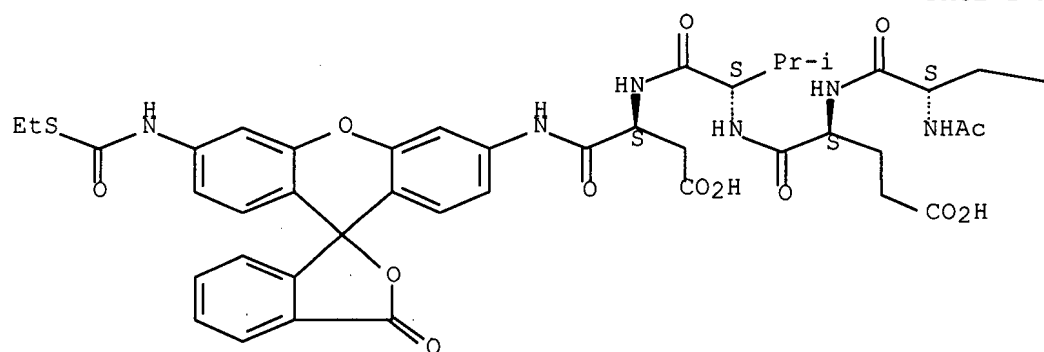


RN 223538-90-7 USPATFULL

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Absolute stereochemistry.

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—CO<sub>2</sub>H

IT 223539-51-3P 223539-54-6P 223539-65-9P  
223539-78-4P

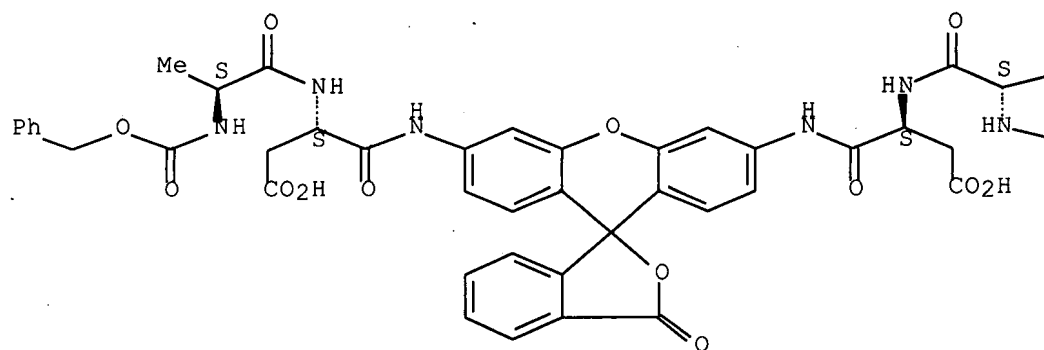
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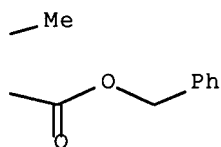
CN L- $\alpha$ -Asparagine, 2,2'-[(3-oxospiro[isobenzofuran-1(3H),9']-[9H]xanthene)-3',6'-diyl]diimino]bis[N-[(phenylmethoxy)carbonyl]-L-alanyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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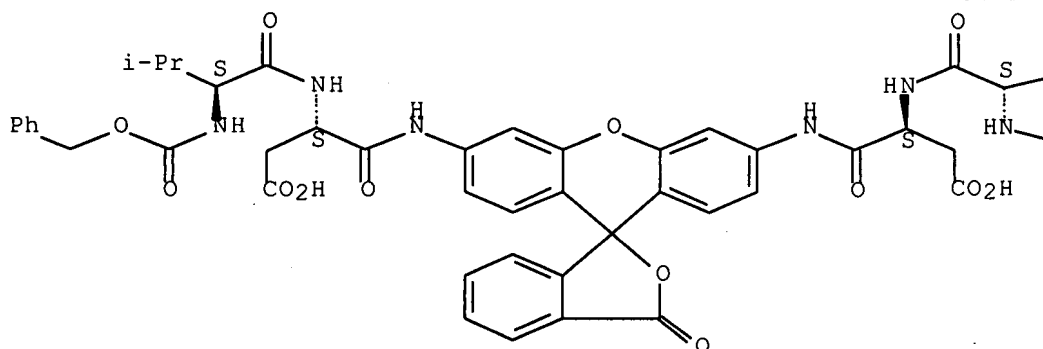


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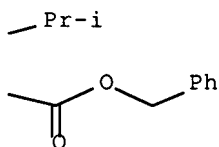
CN L- $\alpha$ -Asparagine, 2,2'-[(3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3',6'-diyl)diimino]bis[N-[(phenylmethoxy)carbonyl]-L-valyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

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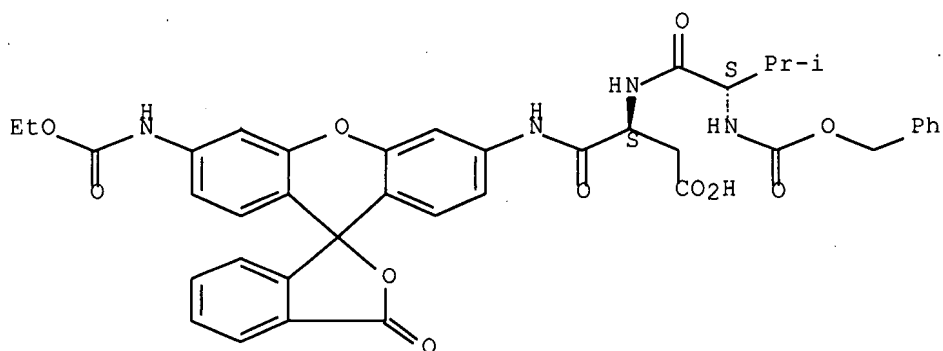
PAGE 1-B



RN 223539-65-9 USPATFULL

CN L- $\alpha$ -Asparagine, N-[(phenylmethoxy)carbonyl]-L-valyl-N-[6'-[(ethoxycarbonyl)amino]-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthene]-3'-yl]- (9CI) (CA INDEX NAME)

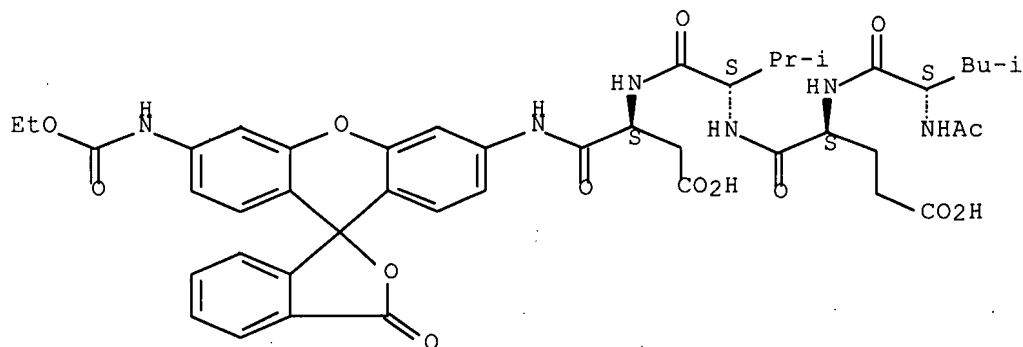
Absolute stereochemistry.



RN 223539-78-4 USPATFULL

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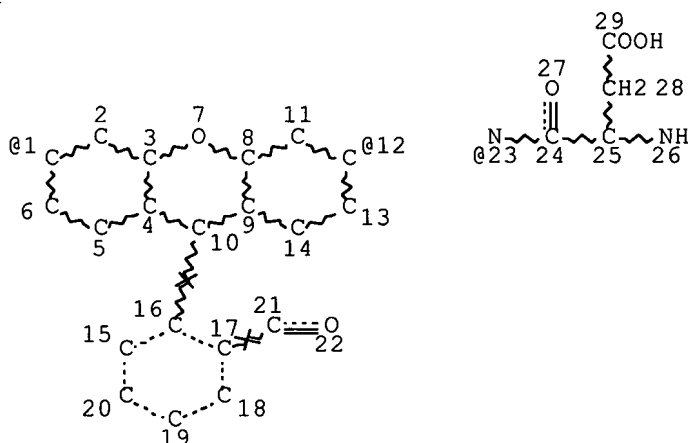
Absolute stereochemistry.



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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 29

STEREO ATTRIBUTES: NONE

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101 ANSWERS

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SEL RN

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-8/BI OR 220846-75-3/BI OR 220846-80-0/BI OR 223538-18-9/BI OR



223538-19-0/BI OR 223538-20-3/BI OR 223538-21-4/BI OR 223538-22-5/BI OR 223538-24-7/BI OR 223538-25-8/BI OR 223538-26-9/BI OR 223538-27-0/BI OR 223538-28-1/BI OR 223538-29-2/BI OR 223538-30-5/BI OR 223538-31-6/BI OR 223538-32-7/BI OR 223538-33-8/BI OR 223538-34-9/BI OR 223538-35-0/BI OR 223538-36-1/BI OR 223538-37-2/BI OR 223538-38-3/BI OR 223538-39-4/BI OR 223538-40-7/BI OR 223538-41-8/BI OR 223538-42-9/BI OR 223538-43-0/BI OR 223538-44-1/BI OR 223538-45-2/BI OR 223538-46-3/BI OR 223538-47-4/BI OR 223538-48-5/BI OR 223538-49-6/BI OR 223538-50-9/BI OR 223538-51-0/BI OR 223538-52-1/BI OR 223538-53-2/BI OR 223538-54-3/BI OR 223538-55-4/BI OR 223538-56-5/BI OR 223538-57-6/BI OR 223538-58-7/BI OR 223538-59-8/BI OR 223538-60-1/BI OR 223538-61-2/BI OR 223538-62-3/BI OR 223538-63-4/BI OR 223538-64-5/BI OR 223538-65-6/BI OR 223538-66-7/BI OR 223538-67-8/BI OR 223538-68-9/BI OR 223538-69-0/BI OR 223538-70-3/BI OR 223538-71-4/BI OR 223538-72-5/BI OR 223538-73-6/BI OR 223538-74-7/BI OR 223538-75-8/BI OR 223538-76-9/BI OR 223538-77-0/BI OR 223538-78-1/BI OR 223538-79-2/BI OR 223538-80-5/BI OR 223538-84-9/BI OR 223538-86-1/BI OR 223538-90-7/BI OR 223538-91-8/BI OR 223538-92-9/BI OR 223538-93-0/BI OR 223538-94-1/BI OR 223538-95-2/BI OR 223538-96-3/BI OR 223538-97-4/BI OR 223538-98-5/BI OR 223538-99-6/BI OR 223539-00-2/BI OR 223539-01-3/BI OR 223539-02-4/BI OR 223539-03-5/BI OR 223539-04-6/BI OR 223539-05-7/BI OR 223539-06-8/BI OR 223539-07-9/BI OR 223539-08-0/B  
D SCAN

FILE 'STNGUIDE' ENTERED AT 09:45:07 ON 27 DEC 2006

FILE 'LREGISTRY' ENTERED AT 09:46:22 ON 27 DEC 2006  
E RHODAMINE 110/CN

FILE 'REGISTRY' ENTERED AT 09:46:39 ON 27 DEC 2006  
E RHODAMINE 110/CN  
L3 1 SEA ABB=ON "RHODAMINE 110"/CN  
D SCAN

FILE 'STNGUIDE' ENTERED AT 09:47:38 ON 27 DEC 2006

FILE 'CAPLUS' ENTERED AT 10:19:47 ON 27 DEC 2006

L4 2128 SEA ABB=ON WEBER E?/AU  
L5 2050 SEA ABB=ON CAI S?/AU  
L6 267 SEA ABB=ON KEANA J?/AU  
L7 208 SEA ABB=ON DREWE J?/AU  
L8 29791 SEA ABB=ON ZHANG H?/AU  
L9 1 SEA ABB=ON L4 AND L5 AND L6 AND L7 AND L8  
D SCAN  
L10 50258 SEA ABB=ON SCREENING/CW  
L11 506316 SEA ABB=ON NEOPLAS?/OBI OR CANCER?/OBI  
L12 56 SEA ABB=ON (L4 OR L5 OR L6 OR L7 OR L8) AND L10 AND L11  
L13 10 SEA ABB=ON FLUOR?/OBI AND L12  
L14 1 SEA ABB=ON L1 AND L13

FILE 'REGISTRY' ENTERED AT 10:22:13 ON 27 DEC 2006

L15 STR  
L16 2 SEA SSS SAM L15  
D SCAN  
L17 STR L15  
L18 2 SEA SSS SAM L17  
L19 101 SEA SSS FUL L17  
SAVE TEMP L19 GIT381FULL/A

L20 43 SEA ABB=ON L19 AND L2

FILE 'CAPLUS' ENTERED AT 10:28:12 ON 27 DEC 2006

L21 16 SEA ABB=ON L19

FILE 'REGISTRY' ENTERED AT 10:28:24 ON 27 DEC 2006

L22 ANALYZE L19 1- LC : 6 TERMS  
D

FILE 'CAPLUS' ENTERED AT 10:29:25 ON 27 DEC 2006

D QUE L13

L23 10 SEA ABB=ON L13 OR (L13 AND L19)

FILE 'USPATFULL' ENTERED AT 10:30:37 ON 27 DEC 2006

L24 254 SEA ABB=ON WEBER E?/AU

L25 115 SEA ABB=ON CAI S?/AU

L26 74 SEA ABB=ON KEANA J?/AU

L27 35 SEA ABB=ON DREWE J?/AU

L28 1322 SEA ABB=ON ZHANG H?/AU

L29 169158 SEA ABB=ON SCREENING OR SCREENING/IT

L30 136770 SEA ABB=ON NEOPLAS? OR CANCER?

L31 39835 SEA ABB=ON (NEOPLAS? OR CANCER?)/IT

L32 148 SEA ABB=ON (L24 OR L25 OR L26 OR L27 OR L28) AND L29 AND (L30  
OR L31)

L33 22871 SEA ABB=ON SCREENING/IT

L34 25 SEA ABB=ON (L24 OR L25 OR L26 OR L27 OR L28) AND L33 AND L31

L35 94536 SEA ABB=ON FLUOR?/IT

L36 10 SEA ABB=ON (L24 OR L25 OR L26 OR L27 OR L28) AND L33 AND L31  
AND L35

L37 9 SEA ABB=ON L19

FILE 'USPATFULL' ENTERED AT 10:32:31 ON 27 DEC 2006

D QUE L36

L38 10 SEA ABB=ON L36 OR (L36 AND L37)

FILE 'TOXCENTER' ENTERED AT 10:32:53 ON 27 DEC 2006

L39 2 SEA ABB=ON L19

FILE 'CAPLUS, USPATFULL, TOXCENTER' ENTERED AT 10:33:10 ON 27 DEC 2006

L40 23 DUP REM L21 L37 L39 (4 DUPLICATES REMOVED)  
ANSWERS '1-16' FROM FILE CAPLUS  
ANSWERS '17-23' FROM FILE USPATFULL

L41 20 DUP REM L23 L38 (0 DUPLICATES REMOVED)  
ANSWERS '1-10' FROM FILE CAPLUS  
ANSWERS '11-20' FROM FILE USPATFULL  
D IBIB ED ABS HITSTR 1-20

FILE 'REGISTRY' ENTERED AT 10:34:28 ON 27 DEC 2006

D STAT QUE L19

FILE 'CAPLUS' ENTERED AT 10:34:37 ON 27 DEC 2006

L42 16 SEA ABB=ON L19

L43 14 SEA ABB=ON L42 NOT L23

FILE 'USPATFULL' ENTERED AT 10:35:38 ON 27 DEC 2006

D QUE NOS L37

L44 4 SEA ABB=ON L37 NOT L38

FILE 'CAPLUS, USPATFULL' ENTERED AT 10:35:47 ON 27 DEC 2006

L45 16 DUP REM L43 L44 (2 DUPLICATES REMOVED)

ANSWERS '1-14' FROM FILE CAPLUS  
ANSWERS '15-16' FROM FILE USPATFULL

FILE 'MARPAT' ENTERED AT 10:36:38 ON 27 DEC 2006

FILE 'CAPLUS, USPATFULL' ENTERED AT 10:36:47 ON 27 DEC 2006  
D IBIB ED ABS HITSTR L45 1-16

FILE 'HOME' ENTERED AT 10:37:17 ON 27 DEC 2006  
D STAT QUE L19

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